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See Page 3

VOL. LXXXII No. 2109

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as a newspaper]

LONDON, OCTOBER 17, 1959

PRICE NINEPENCE

CURRENT TOPICS

No Re-nationalisation

IN the transport field the outcome of the General Election may well presage the "period of stability to press on with reconstruction" for which the British Transport Commission expressed a pious hope in its 1956 annual report, with the possibility "that the whole fabric of public transport will no longer be subjected to periodic and seismic upheaval on political account." Postponed indefinitely—and perhaps for ever—is the re-nationalisation of road haulage which figured prominently in the Labour Party's programme, but even the new Conservative Government may be confronted by problems of ancillary usage failing temperate fashioning of traders' own transport. It is to be hoped, however, that the Socialist intention to relate road building to "a national plan which covers all the transport needs of an expanding economy" will not be ignored and that the dangers of dealing in isolation with the differing facets of the transport problem will at length be realised. Early steps will have to be taken to deal with the necessity for capital reconstruction to which the B.T.C. referred in its re-estimation of its financial position in the light of the modernisation plan. The Opposition will no doubt continue to urge that the Commission should be relieved of interest charges to an extent which would enable it to pay its way out of current revenue. In the closing days of the last Parliament the Government promised careful consideration of the B.T.C. programme involving extra capital expenditure. The Government, stated the Minister of Transport, would hope to go further with the policy of decentralisation and greater regional autonomy, giving more chance to the regions to run their own affairs in their own way, subject only to broad policy control at the top. It is to be hoped that the absurdities of hiving off the prosperous sections of the undertaking will be realised before such wild-cat proposals are adopted as Government policy. The new railway fares scheme, which is expected to be introduced on November 2, should open up new sources of revenue and its results will be watched with interest.

Additions to Famous Timetable

ONE of the world's longest railway journeys—from London to Hanoi, in North Viet-Nam (erstwhile Indo-China), is among new information in *Cooks Continental Timetable*, commencing with the October, 1959, edition. The 9,628-mile journey from London to Hanoi would take about 17 days, using the Dover-Dunkirk train ferry and continuing via Brussels (8-hour stop), Berlin (10-hour stop), Warsaw (straight through), Moscow (7-hour stop) and the Trans-Siberian railway to Peking (32-hour stop) and then southward through China and over the new railway linking China with North Viet-Nam. Tickets beyond Peking are not available in London. Russian food is served on the train to Peking, and the Chinese restaurant car on the Peking-Hanoi train provides a choice of "European" (Russian) food or a Chinese menu for which chopsticks are supplied. The journey would cost about £168 (including sleeping car berths), but this does not include meals en route or the cost of the overnight stop at Peking. Another long railway journey now shown in *Cooks* timetable is that from Narvik, in Norway, to the Persian Gulf at Khorramshar, a 4,833-mile journey taking 10 days and crossing Sweden, Finland, the U.S.S.R. and Iran. This publication distills the spirit of railway romance.

The Work of the A.T.A.C.

IN his statement accompanying the eleventh annual report of the Air Transport Advisory Council the Minister of Transport regrets that there has been little or no improvement in two matters mentioned in the previous report. One was a "regrettable tendency" to apply for far more inclusive tours services than applicants found they actually needed in the event and the other was failure to complete applications by the

agreed target date. Recognising the difficulties and accepting that the remedy could well lie as much with tour promoters as with operating companies, Mr. Harold Watkinson points out that, unless a solution can be found, their interests and those of the public are bound to suffer. He refers also to his entire approval of the revised practice whereby the A.T.A.C. no longer advertises applications for approval of scheduled services until it is advised by Ministry officers that the company is likely to be found operationally fit to operate them. There were, during 1958-59, six representations from the public regarding facilities offered or the charges therefor, but only in one case did the Council make any formal recommendation to the Minister. There was again a substantial

dangerously incommenced, by the suicidal antics of a minority of car drivers no one knows. We owe to these level-headed professional drivers a debt of gratitude for the example they exert. That example could be reinforced if the legions of new drivers were given an extended course of professional instruction leading to a more searching driving test. It is no longer good enough that they should gain their road sense at such expense in life and property.

Safe Professional Driving

IT was a relief to turn again from the foregoing aspect at the end of last week to that of the professional driver, many with something like a quarter-century of freedom from blameworthy accident, seen at

children. But his hearers had a share in the brighter side—the 7,000 a year death rate had been cut to 6,000 and the deaths of children were down from five a day to three a day. He thought the happy family spirit displayed there was the foundation of road safety; he was particularly glad to see the drivers' wives taking part in the function that evening. There was no doubt that a driver with a happy home background was a safer man on the road, so that womenfolk could play their part in promoting safety.

Contribution of the Traffic Engineer

SITE conditions must contribute more frequently to road accidents than is the view of the police, said Mr. J. T. Duff, senior engineer in the traffic engineering branch of the Ministry of Transport in London last week. This expert verdict, which will doubtless receive a warm welcome from many vehicle operators, was, however, less of an admission of failure by M.O.T. highway engineers to cure accident blackspots than a plea for more widespread resort to the services of the traffic engineer. Mr. Duff was addressing the National Safety Congress (see page 9) on the dual role of the traffic engineer—to get traffic flowing more freely and to reduce the accident rate at one and the same time. Contrary to popular opinion, he said, the two objectives were by no means incompatible. Mr. Duff defended the spacing of the new double white lines on trunk roads which he claimed were founded on the experience of average speeds in each locality and he said of speed limits that the normal prudent driver will take notice of speed limits which are reasonably set but will ignore those which are unreasonable. He deduced this from the 40 m.p.h. experiments around London. Where a road previously restricted to 30 m.p.h. had been upgraded to 40 m.p.h. there was in fact no significant increase in the speed of 85 per cent of vehicles, but where an unrestricted road was limited to 40 m.p.h. there was a significant reduction in speeds and a 10 per cent reduction in accidents. These experiments reinforce the already widely held conclusion that a speed approaching 40 m.p.h. is a safe, and the most economical, speed even in urban conditions, provided conditions are suitable. There seems no good reason why public service vehicles should be excluded from the benefits.

An Award to the B.T.C.

EACH year since the inception by the British Travel and Holidays Association in 1956 of the Come to Britain Trophy for tourist enterprise the British Transport Commission has succeeded in gaining a certificate of commendation, but this year it was felt that the various improvements and innovations submitted by the Commission fully justified the award of the actual trophy. The group presented for approval comprised three for which British Railways was responsible and one achievement each by British Transport Waterways and British Transport Docks. The B.R. successes were the Kent Coast electrification (stage 1), the all-line rail rover ticket introduced this year, and the recently initiated Scottish lochs cruise from Heysham. Another cruise, the five-day Heart of England operation between Nottingham and Boston, represented the share of Waterways in the success while B.T.C. Docks contributed the new passenger terminal at Riverside Quay, Hull. When he presented the awards Sir Arthur Morse, chairman of the association, emphasised the stress that was laid on the word "enterprise." The Commission had thoroughly deserved the reward. It had become one of those institutions beloved of the British, who were never happier than when they were grumbling. He sometimes thought it had taken its place beside the Civil Service as a butt against which all kinds of ill-informed and oft-times unfair criticisms were aimed. It made people feel better to indulge in this kind of natural outlet to their feelings, but they should bear in mind that the B.T.C. was a mighty big target which was difficult to miss, no matter how badly the shots were aimed.

LEADING FEATURES IN THIS ISSUE

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amount of work carried out with applications totalling 940 including those for circular tours, a type of operation which has once more been brought within the sphere of the A.T.A.C. after a period of six years during which applications were made directly to the Minister. All recommendations were approved by the Minister and, in accord therewith, 354 applications were approved in whole or in part—81 were later withdrawn by the operators concerned—and 409 were rejected.

August Tragedy on the Roads

THIS August has thrown up a record toll of road casualties. The easing of credit restrictions and the permanent appearance of the sun combined, it seems, to raise the total killed in that month to 546, 1½ per cent more than in the previous August. The number of injured rose, however, by no less than 11½ per cent and it is, perhaps, this figure which more clearly illumines the picture. It is estimated that there were 13 per cent more vehicles on the road. The latest monthly statistics coincide with those published for 1958 as a whole. Fatalities increased by 7½ per cent to 5,970 and serious injuries by 8½ per cent to 69,166; carelessness in turning right, or in crossing road junctions, contributed more than any other factor to this gloomy picture. Twenty-two per cent of the vehicles involved in accidents were motor-cycles, scooters or mopeds, roughly the proportion which these classes of vehicle bear to the total vehicle population—but they account for only 7 per cent of vehicle mileage. Against this rising tide of casualties the unspectacular record of the seasoned bus and commercial vehicle driver inevitably goes unheralded. These are the men, together with the experienced car driver, who in effect represent the difference between the increase in vehicles and the increase in accidents. They are doing a double job, their two eyes constantly doing the work of four. How frequently they are exasperated, and even

the annual staff dinner of Crow Carrying Co., Limited, of Barking, Essex. The note for this happy occasion—presided over by Mr. Herbert H. Crow, chairman of the company and one of the few hauliers to achieve the distinction of a vice-presidency of the Institute of Transport—was set by Mr. R. G. Bercham, of Jeyes Sanitary Compounds, Limited, who said he thought he had been invited because of the birdlike affinity between crows and jays; he commended the spirit of friendship which pervaded the company, with which he had dealt from its inception. In reply to the toast given by Mr. Bercham, Mr. Crow congratulated Jeyes on their progress from a small factory in Plaistow to becoming ratepayers in Barking. His own company continued to make the good progress that was only possible if they gave satisfaction. He liked customers to be Crow-minded and to give such testimonials as "no trouble with cleanliness of tanks since we changed to Crow." Buildings, vehicles and management might be good but the man at the wheel, in daily contact with the customers, could make or mar the business. They now expected four or five years of free-enterprise development; from the progress of the past 50 years he thought their successors might be delivering on the moon in 2000.

Happy Drivers are Safer

IN the Lorry Driver of the Year competition they had won the cup for the best-maintained A-licensed vehicle for the third year in succession; he thanked Mr. Fred Reynolds and he thanked the men for their work for the company. Mrs. Crow presented a long-service award to Mr. C. E. Squibb and Mr. R. F. E. Howard-Hodges, deputy director-general, Royal Society for the Prevention of Accidents, presented the safe driving awards. He said it was just 20 years since he had had the pleasure of visiting them. In that time 100,000 people had lost their lives on the roads—equivalent to the Borough of Twickenham wiped out, men, women and

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BRITISH RAILWAYS



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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements.

Problems of Shipping

MAJOR problems confronting the British shipowner today formed the theme of the presidential address of Mr. R. G. Grout, chairman and managing director, General Steam Navigation Co., Limited, this week to the Institute of Transport. Explaining the fundamental necessity of transport to human existence he stressed the important part played by the sea throughout history: shipping documents in the archives of the British Museum, dating back to the third century B.C., bore an astonishing resemblance to the modern bill of lading and charter party. For long Britain's merchant fleet had been taken for granted, and one was apt to forget that it was not merely a sideline but a very lifeline. A good deal of the world's tonnage was now laid up, but it was due to the—sometimes criticised—conservatism of British shipowners that our proportion of the total was less than that of other countries. At the outbreak of the 1914-18 war Britain, with 19½ million tons of shipping, owned 42 per cent of the world's merchant fleet. That war, just as did the later one, adversely affected our position; by 1925, although possessing the same tonnage, our share of the total had dropped to 31 per cent, and by 1939 it had declined to just over 26 per cent. In 1953 the proportion had become slightly under 20 per cent—18½ million tons out of nearly 93 million tons, and the process of expansion of world fleets has since continued unabated. Although by the middle of 1958 Britain's tonnage had again slightly increased to 20½ million tons our proportion of world tonnage, at 118 million tons, had dropped to 17.2 per cent.

Bedevelled by Uncertainty

WHAT are the factors underlying this situation? In the first place, Mr. Grout pointed out, British shipping could not in any case have continued its pre-1914 share of world trade; no one nation could cope with such a task—the manning problem alone would prove insoluble. He paused to commend the happy relationship which exists between masters and men, of whom 140,000 employed in the British mercantile marine are domiciled in the United Kingdom, pointing out that during a period of very considerable industrial unrest the British shipping industry had managed to evolve a charter which was regarded as a model worth copying. The fact remains that the continued shrinkage of Britain's proportion of world tonnage is too serious to be regarded with equanimity: the future prosperity of the country is bound up with the maintenance of a thriving mercantile marine. British shipping is indeed passing through a crisis of which the main contributory causes extend far beyond the commercial field proper and into the domain of power politics. Assessment of the forward prospects of trade, which shipowners have always to be making, is difficult enough because of the commercial boom-slump cycle. But the task becomes

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almost impossible when its consideration is bedevilled by uncertainty as to what further forms of interference in the normal course of trade may be introduced by foreign governments within the lifetime of the ship under contemplation. "The British shipowner," exclaimed Mr. Grout, "does not fear, and is prepared to meet, competition arising on a commercial basis, but he finds it more and more difficult to stay in a game where the dice are increasingly loaded against him."

Flag Discrimination and Subsidies

SO far insoluble is the problem of flags of convenience, added to which are the still greater evils of flag discrimination, subsidies, and other artificial aids to shipping, which are of longer standing. Flag discrimination, in the words of the marine transport committee of O.E.E.C., "comprises above all any action by governments which restricts the freedom of traders to choose the ships in which cargo may be carried and thus places impediments in the path of the free flow of international trade." It is particularly inimical to Britain's merchant navy, which has been built up on the principle of freedom of choice and on free and fair competition in the open market. Its impact, Mr. Grout pointed out, may be measured by the fact that our contribution to the balance of payments in 1957 was earned by trading to some 64 different countries, of which no fewer than 40 have practised flag discrimination in one form or another during the past five years. Then there are the subsidies to foreign shipping, which favour both construction and operation. In the United States, for example, the subsidy covers nearly half the cost of the ship, and the owner, while paying the other half, enjoys cheap mortgage rates or long-term loans at low interest. To operators the subsidy is frequently paid to those expressing the need of it to meet foreign flag competition and to promote foreign commerce on an essential trade route.

Value to the Nation

BRITISH shipping, by contrast, according to the last annual report of the U.K. Chamber of Shipping,

has no sort or kind of protection even on the United Kingdom coast, let alone in the world-wide trades where the size of its participation can be judged by the great contribution it makes through invisible exports to the country's balance of trade. It has no subsidy either for building or operating. It has no help of the kind that many countries give by diverting cargoes into their own ships. Wherever British shipowners trade they have to compete with nationalised shipping, with subsidised shipping, with non-taxpaying shipping, as well as with the very efficient maritime nations which also have to stand on their own feet.

"It is true," stated Mr. Grout, "that, in relation to taxation, the initial and investment allowances are available to British shipping. But the former has to be repaid and the latter is only of benefit when there are profits against which it can be set, and in times of acute depression such as that through which shipping is now passing the investment allowance is of comparatively little value." Latest Government estimates of the contribution made by British shipping to the national economy through invisible exports were, for dry cargoes alone, £300 million in 1957 and £260 million in 1958. There is also the foreign currency saved by the carriage of imports into the United Kingdom in ships under the British flag, amounting in 1952 to £218 million. Today the world finds itself with more ships than there is cargo to move; in fact at the end of July, 1959, laid-up merchandise shipping had reached the fantastic total of nearly 9 million tons. Thus shipping the world over is passing through a period of acute depression—a position, as Mr. Grout stressed, which emphasises the need for the nations to get together and reconcile their differences in this vital industry. This is a task in which the new British Government might well take the lead, perhaps through the medium of the International Maritime Consultative Organisation, a body which owes its recent inauguration to British initiative. Meanwhile it should consider the measure of relief which might reasonably be given to the British shipowner from his present crushing burden of taxation, a burden which shackles him in his attempts to preserve existence in the face of widespread nationalised and State-aided competition.

NEWS SUMMARY

WORK has begun again on quadrupling the Metropolitan Line of London Transport between Harrow and Rickmansworth. This scheme of 1935, abandoned in 1939, will facilitate electrification beyond Rickmansworth to Amersham and Chesham. The hundredth Vickers-built Sulzer diesel engine for British Railways has been dispatched from Barrow to Crewe for fitting in a Type 2 diesel-electric locomotive. See page 5. Eastern Region has diesel motive power depots under construction at Darnall (Sheffield), Finsbury Park and Ipswich. Mr. T. W. H. Gailey, general manager, Western and Southern National Omnibus Companies, who joins the Tilling board of management on January 1, 1960, will then

become chairman of Hants and Dorset Motor Services, Limited, and Southern Vectis Omnibus Co., Limited.

British European Airways has made a profit of more than £4½ million during the four summer months. See page 9.

The fifth Elbourne memorial lecture will be delivered to the British Institute of Management on October 30 by Mr. Harold Wilmot, C.B.E., vice-president of B.I.M. and chairman and managing director of Beyer, Peacock and Co., Limited. The Elbourne lecture perpetuates the memory of Mr. Edward T. Elbourne, founder of the Institute of Industrial Administration; it was inaugurated in 1955. Mr. Wilmot has chosen as his subject "The Management Burden." The meeting is at 8 p.m. at the Royal Commonwealth Society, Northumberland Avenue, W.C.2.

BY COACH TO MOSCOW

Remarkable Performance of Ford-Duple Vehicle

POSSIBILITIES OF REGULAR LOW-COST SERVICE

SUITABILITY of a vehicle for a particular purpose cannot of course be assumed automatically from the successful outcome of only one run, but the remarkable performance put up by the Ford-Duple Thames coach on its recent round trip from London to Moscow and return must recommend it to operators as a thoroughly reliable vehicle capable of sustained hard work under widely

cord tyres, and three extra fuel tanks having a total capacity of 112 gal.

The Coachwork

The Thames is available with coachwork of Burlingham, Duple, Harrington or Plaxton manufacture, that of the vehicle used for this demonstration run having been produced by Duple Motor Bodies, Limited. The body is a standard Duple body shell for 41-seat luxury coach, converted by



The Thames-Duple coach posed for a picture in a quiet Moscow street

varying conditions. As we recorded last week, the 1,713-mile outward journey was made non-stop, except for the Channel crossing and frontier checks, in the overall time of 44 hr. 57 min. Total running time was 33 hr. 29 min., giving the phenomenal average speed of 51.16 m.p.h.

Although a rather more leisurely schedule was set for the return journey, this too was run virtually non-stop between Minsk and Ostend, 1,230 miles, with a brief halt for a meal in Warsaw, at an average running speed of over 45 m.p.h. Roundly 3,500 miles was covered, probably from a third to a half of it over the types of road surface that could be counted on to search out any weaknesses in construction or handling qualities, without the need to do more than replenish fuel, oil and water at appropriate intervals, consumption of which were all notably low for the sustained very high-speed running achieved.

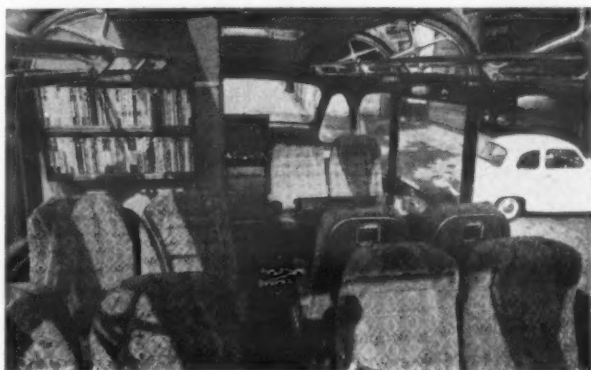
The Chassis

The Thames passenger chassis has been developed by Ford Motor Company, Limited, from the successful Trader 7-ton goods chassis, using many

Duple Motor Bodies to suit the requirements for this application. The standard seating is replaced by 20 Chapman four-position reclining seats, two pairs of which are arranged face to face with a standard Duple tubular-frame table between. Each seat is provided with an adjustable footrest and a Morley rug. A Chapman driver's seat is fully adjustable and has a three-position ventilated squab, while a similar type of courier's seat is on a swivelling base.

The space normally occupied by the rear seat

accommodates special thermal cabinets for hot and cold food storage and for cutlery, crockery and so on, flanking a central two-burner Calor hotplate. A 32-lb. cylinder of Calor gas is housed in the rear locker. A toilet compartment built into the off-side of the body approximately over the rear axle houses a Delaney Gallay aircraft-type chemical lavatory, a wash basin fed by small hand pump from a



Comfortable interior showing Chapman reclining seats, library on wall of toilet compartment, card table and part of kitchen unit at rear

25-gal. fresh-water tank and an 18-gal. waste-water tank under the basin. Panelling of the toilet compartment and the built-in rear cabinets are finished in p.v.c. and Formica matching the interior trim. Two Ronson electric shavers are fitted in a rack outside the toilet compartment, with a converter and plugs for operation from the vehicle batteries. A Smiths Radiomobile all-wave radio is equipped for passenger address use by



A few of the participants shortly after arrival in Moscow showing little signs of strain after covering 1,700 miles at an average speed of over 50 m.p.h.

common components, to operate as a 37-41-seat coach at a gross weight of 8½ tons. It differs from the Trader in the chassis frame, which is deeper and longer, in the rear springs and rear-wheel hubs, which give a 2-in. increase in rear track and permit the use of larger rear brakes. The vehicle used for the trip was powered by the Ford 6D diesel engine, which develops 100 b.h.p. at 2,500 r.p.m. from a capacity of 5.4 litres (an alternative is the Ford six-cylinder 4.9-litre petrol engine).

Transmission is through a 12-in. semi-centrifugal hydraulically operated dryplate clutch, four-speed synchromesh gearbox and two-speed rear axle with Eaton 1350-series gear, giving ratios of 4.5 and 6.25 to 1. Vacuum servo-hydraulic brakes provide a total lining area of 480 sq. in. (over 56 sq. in. per ton gross weight) and steering with a 24.7 to 1 gear ratio gives a turning circle of 65 ft. The vehicle used was a standard export chassis, having heavy-duty rear suspension and Firestone nylon-

either driver or courier. The rear locker is strengthened and converted to carry two spare wheels and spare parts

The Outward Journey

Organisation of the journey was a joint effort by Ford Motor Company, with co-operation in the western part of the Continent of its associates there, and Excelsior European Motorways, Bournemouth, which has wide experience of Continental coach tours and has operated several such tours embracing Moscow and other East European cities during the past two years. A tribute to the soundness of the organisational work, and a measure of the co-operation received throughout, particularly from Intourist and Orbis, the Russian and Polish official travel agencies, was that arrival in Moscow was accomplished within 16 min. of the very high-speed planned schedule.

(Continued on page 14)



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LORRY—BUS—COACH

Grass Verge is Part of Highway

A VEHICLE which was left parked on a grass verge to the carriageway for five hours caused an unnecessary obstruction of the road within the meaning of section 89 of the Motor Vehicles (Construction and Use) Regulations, 1955, the High Court decided this week. The Lord Chief Justice (Lord Parker) said that the real point was whether this was an unnecessary obstruction, not whether it was an unreasonable obstruction. The whole of the highway constituted the road under regulation 89.

Buses Preferred for Football Services

SPECIAL express bus services are being run this season by London Transport from Manor House Station, Wood Green Station and Walthamstow to the Tottenham Hotspur football ground and from Clapham Common to the Chelsea club. The single fare from Manor House is 1s. An interesting point is that all three services to the Spurs ground parallel existing trolleybus routes, but using buses gets supporters there (and back) much quicker, since the bus can overtake service trolleybuses on the heavily-used routes in and around Tottenham. London Transport also operates football excursion buses from some 70 points in the Metropolis to six grounds.

S.A.R. Coach Tours

THE National Transport Commission has given South African Railways permission to operate three additional coach tours. The first is between Durban and Johannesburg via the Kruger National Park and the Hluhluwe Game Reserve, Swaziland and Zululand. It is a six-day tour that costs £43 10s. The other is a new route between Durban and Johannesburg, via Ermelo, Piet Retief, Vryheid and Zululand, a two-day trip costing £12. In each case the charge covers hotel accommodation and meals. A six-day tour between Durban and Cape Town costs £36 10s.

Carrier Provides Insulated Vans

INSULATED vans are now being operated by Van Hire, Limited, which is a part of the organisation of Capon and Sons, Limited, London carriers since 1891, on shop deliveries in the Metropolis and also for the catering industry. For example, catering at the recent Farnborough Air Show was served by these vehicles. The vans, one of which is illustrated, are on Austin 30-cwt. chassis; the conver-

sion was carried out by Mann Egerton and Co. Limited, of Norwich, and included fitting 4 in. of expanded polystyrene for insulation purposes. The net payload is 25 cwt. in a space measuring 150 cu. ft. There is a small door in the bulkhead with a roller shelf behind it, allowing the driver to unload his next delivery without having to open the rear door, which would involve loss of cold air.

Road—Air to Scotland

SUCCESSFUL application has been made by Sheffield United Tours, Limited, for a road-service licence for a combined air-coach tour to Scotland. Passengers from Sheffield will be taken by coach to Blackpool and fly from there to Glasgow where the Scottish coach tour will continue.

No-Smoking Compromise?

THERE was a second adjournment, for two months, at the conclusion of the hearing on October 12 by the North Western Area Traffic Commissioners on their proposal to impose a ban on smoking in the lower saloon of Ribble double-deck buses. The chairman, Mr. F. Williamson, said that a substantial body of passengers found smoking in the bottom deck of double-deck vehicles disagreeable, unpleasant, offensive, distressing or injurious to health and he considered they were entitled to consideration. But the Commissioners were anxious not to ride roughshod over the view of the Ribble company, which opposed the ban. They would like the company to consider if it would be feasible to introduce in either a proportion of its undertaking or in certain types of its services the requirement that there should be no smoking in a portion of the bottom deck of double-deck vehicles.

Paintshop Economies

CONSULTANTS Harold Whitehead and Partners, Limited, claim that it took Portsmouth Corporation paint shop 450 man-hours to paint a bus before they were called in—they estimated it could be done in 93 hr. by the introduction of new methods. The former 450 hr. were due to an excessive amount of labour in the paint shop, it is claimed. Since their arrival, six painters and three brush hands have been put under notice or have resigned. The reduction in labour cost from this source alone is about £4,600. Mr. W. E. Jones,

works superintendent, says that at present, with new methods, the department is painting a bus in 280 hr., and he thought that, in time, this could be reduced to 150 hr. Asked his views on the whole scheme, Mr. H. C. Simmonds, general manager and engineer, said he thought it would be possible to effect savings in the undertaking of £10,000 without embarking on the incentive bonus scheme and work-study programme outlined by the consultants for the maintenance section. This, it was claimed, would save £25,000 a year. A sub-committee was set up to study the report of the consultants.

N.J.I.C. to Consider Standing Ban

SHEFFIELD bus crews on October 11 decided to continue their ban on standing passengers on buses with more than 56 seats. They maintain that the national service agreement does not apply



A 15 ft. high Leyland mobile tower crane shares the track with a rail wagon on the Dunkerque—Dover ferry. Sleeping accommodation for lorry drivers is now available on this daily and nightly service

to buses in excess of that capacity. The newest Sheffield buses have 69 or 78 seats. Similar unofficial action has been taken at Liverpool; the N.J.I.C. was to consider the issue yesterday (October 16).

Coin Sorting at Bus Depots

AT Nottingham, the City Transport Committee has approved the purchase of six coin-weighing scales, at a cost of £454. The scales have a dial similar to a grocer's scale, but are calibrated in pounds, shilling and pence for the equivalent weight of mixed silver, sixpenny pieces, three-penny bits, pennies and halfpennies. Conductors

will, in future, pocket all coins in paper packets which will be weighed on these machines and thus save the need of coin counting. A prototype has been on extended test since July. The Transport Committee at Newcastle upon Tyne is considering purchasing a £3,000 electronic coin-sorting machine which will sort coins and bulk them ready for paying into the bank.

Normal User Decisions Deferred

TWO hauliers in the Rotherham district which were the subject of takeovers, the new owners being permitted by the Yorkshire area Licensing Authority to extend the radius of their operations, were the subject of appeals by the British Transport Commission, the appeals being heard by the Transport Tribunal on October 7. T. Roberts (Haulage Contractors), Limited, had one vehicle on an A-licence the normal user of which was goods within 10 miles of Renishaw Post Office. Mr. Roberts extended his operations and was granted an A-licence to carry "normally in Yorkshire, Lincolnshire, the Midlands and the North East coast." The other operator is Mr. H. Pike. The existence of a widespread belief by hauliers that an A-licence holder was entitled to alter his operations to meet changing circumstances was mentioned in both cases. Sir Hubert Hull, president of the Tribunal, in deferring decision, said: "We have some reasons for supposing that these cases are considered to be important by persons other than the actual hauliers concerned."

Vehicle Hygiene Offences

USE of a vehicle by a Sheffield firm of food wholesalers led to the firm and one of its drivers being charged at Renishaw on October 12 with offences under the food and hygiene regulations. William Marsden and Son, Limited, Malin Bridge, Sheffield, was fined a total of £6 for failing to take all reasonable steps to ensure the shelves and sides of the vehicle with which food was liable to come into contact were clean; failing to provide suitable washing requisites and an adequate supply of hot and cold water; and exposing food to the risk of contamination because of the vehicle's condition. The driver, Terence Dungworth, of Fox Street, Sheffield, was fined a total of £8 for being the person engaged in the handling of food in a food business carried on in a motor vehicle, the use of which, because of its condition, exposed food to risk of contamination; failing to keep clean the sides and shelves of the motor vehicle; and failing to have his over-clothing kept as clean as was reasonably practicable. He was also summoned for failing to keep his hands as clean as was reasonably practicable. The firm and the driver were also ordered to pay an advocate's fee of £5.



Austin insulated van operated for hire by the Capon organisation in London (see paragraph)

Base Transferred from Penrith to Dundee

UNAUTHORISED change of base of five lorries from Penrith to Dundee over two years ago resulted in a penalty being imposed on the Dundee haulage firm of D. and D. Transport, at a sitting of the Scottish area Licensing Authority in Dundee. Mr. Alex Robertson, the deputy L.A., ordered that one of the lorries be put off the road for six months. The application was for an A-licence in substitution for a special A-licence. Mr. Stanley Dolan, manager of the firm, which is owned by his wife, told the court that the offence was committed unwittingly. After purchasing special A-licensed lorries, he operated them for about six months from their Penrith base, then he lost his accommodation there. He thereafter transferred them to Dundee, his headquarters, without applying for permission to change their base. He now realised his mistake. Mr. Dolan agreed that earnings shown were all in respect of vehicles based at Dundee, and there were no earnings accruing from operations at their properly authorised base at Penrith. He was unaware that the Little Strickland Trading Company, from whom he had bought vehicles and whose accommodation he had used, was still in business at Penrith, and that it had been in business for some time simply as an agency for acquiring and reassigning special A-vehicles.

Bus and Coach Developments

Worth's Motor Services, Limited, Enstone, seeks the licences of T. E. Worth, L. G. and H. O. Phillips (Administrators of the estate of E. H. Phillips), seeks the excursions and tours from Flint of W. G. Richardson.

Chesterfield Corporation and East Midlands Motor Services, Limited, propose a joint service between Chesterfield (Bus Station) and Clay Cross (Eyre Street).

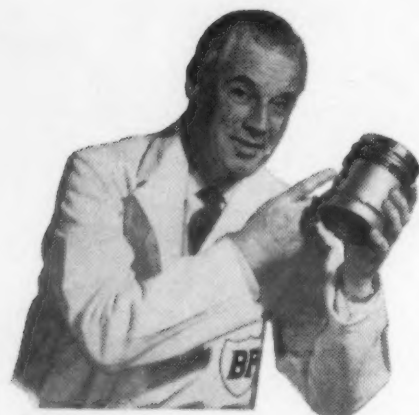
Mr. A. G. Sterling (Sterling Bus Service) has applied to divert his Emerson Park—Hacton Lane route via Alma Avenue and Derby Avenue to Hornchurch Station.

The following Central area bus route changes were introduced by London Transport with effect from October 14 or 18: 7A, London Bridge—Acton, renumbered 7; 54, curtailed on Sunday to run Selsdon—Woolwich (General Gordon Place); 72, renumbered 72a on Sunday and diverted to run Tolworth—East Acton via Duane Road; 163, renumbered 163a on Sunday and extended p.m. to run Camberwell Green—Plumstead (Woodlands Estate) via the route of 192 from Woolwich; 178, Clapton Pond—Stratford, diverted via Homerton High Street, Marsh Hill, Lee Conservancy Road and Eastway to Hackney Wick.

Winter timetables of London Transport Country buses and Coaches took effect on October 14. The main changes including the extension of 308 (Harefield—Rickmansworth Station) to Chorleywood take in 361. The route has been amended in Chorleywood and other modifications include diversion of Sunday journeys on 362 (High Wycombe—Ley Hill) via Widmer End as 362a to replace 366 and the diversion of some off-peak journeys on 388 from Welwyn Church to Welwyn Garden City Station via Blackfan Road and Tewin Road. In the Gravesend area one weekday journey an hour on 487 is extended from Gypsy Corner to Hever Court Estate.

A 75-acre site in Amiens, near Paris, has been selected for construction of the Goodyear Tyre and Rubber Company's new tyre and tube manufacturing plant in France, it is announced by the Goodyear International Corporation. It will be the 15th overseas plant built by Goodyear and the first in France by any American rubber manufacturer.

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VICKERS-BUILT SULZER DIESEL ENGINES

One Hundredth for British Railways

DESIGN BY A PIONEER FIRM

RECENTLY the 100th Sulzer rail traction diesel engine to be built by Vickers-Armstrongs (Engineers), Limited, for British Railways was completed at that company's Barrow-in-Furness works, where Sulzer six- and eight-cylinder engines are in large-scale production. Officers of the British Railways Central Staff and from Regions of British Railways visited the works on September 30 to inspect the engine and to see current production.

The party included Mr. J. F. Harrison, chief mechanical engineer, and Mr. S. B. Warder, chief electrical engineer, B.T.C. (B.R. Central Staff); Mr. T. C. B. Miller, chief mechanical and electrical engineer, Eastern Region; Mr. W. J. A. Sykes, chief mechanical and electrical engineer and Mr. H. S. Smyth, electrical engineer, Southern Region.

Types in Production

The 100th engine is a six-cylinder 6LDA28 developing 1,160 b.h.p. at 750 r.p.m. One of 198 now being delivered to British Railways for Type 2 locomotives, the engine is destined to be fitted at Crewe in a locomotive of the D5000 series for service in the Eastern Region. This unit is one of 30 of this design which will be based on Ipswich; they will be employed on cross-country passenger services and general freight train working in the area.

Also seen by the party were the first production models of the 77 eight-cylinder 8LDA28 engines which will power Type 3 locomotives being constructed by the Birmingham Railway Carriage & Wagon Co., Limited. These are also on order by British Railways from Sulzer Bros. (London), Limited, besides 147 12-cylinder double-bank 12LDA28 engines, the latter suitable for outputs of up to 2,500 b.h.p. The production rate of engines at Barrow is at present 12 a month, but it will soon be 16 a month and may be increased still further.

The completion of the 100th Sulzer diesel engine for British Railways is a noteworthy result of the combination of the experience and resources of two long established companies, Sulzer Brothers and Vickers-Armstrongs. Diesel engine production at Barrow goes back over 50 years, for it was soon after the turn of the century that the Barrow Shipbuilding Company, as it was then known, turned out a six-cylinder oil engine for submarine propulsion. Total diesel construction to date amounts to over 600 engines which represent an aggregate horsepower of nearly 800,000.

Barrow-Built Diesel Engines

At the beginning of the century the company commenced the construction of submarines; and for these petrol engines were produced. The earlier

locomotive application, which was actually a modified version of the eight-cylinder E-class engine, but arranged with cast steel framing and bedplates to give a rigid self-contained unit. As a governed engine it worked very satisfactorily; the drive contemplated was the Vickers-Willans-Jannev. But it was before its day and never developed on a commercial basis.

The history of Sulzer Brothers begins in 1834 when the first iron castings left a new foundry built on the new road to Zürich out of Winterthur. In 1903 both steam turbines and diesel engines were taken up. The Sulzer company had the distinction of affording Dr. Rudolf Diesel effective support in the development of his new engine from as early as

1893 onwards by signing several agreements with him and by building an experimental engine. Despite good results from the steam turbine, the construction of large units was given up in 1911 to enable the development of the diesel engine to be followed even more intensively.

Sulzer Locomotive of 1912

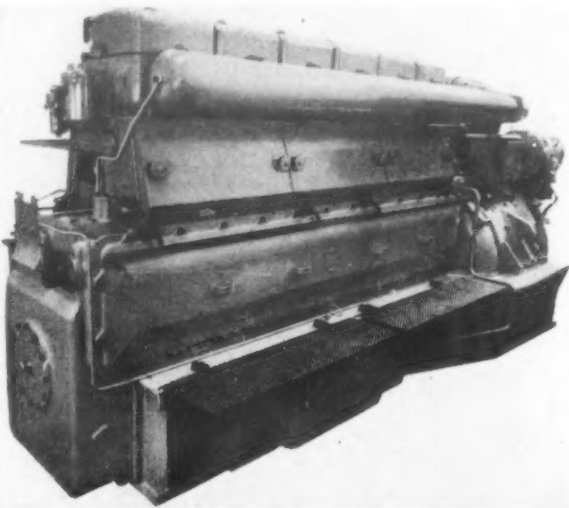
Following hard after this decision came another which was to have important repercussions in the field of railway transport; for in 1912, Sulzer constructed the

first main-line diesel locomotive in the world. The unit was a direct-drive locomotive of 1,000 h.p. which ran both in Switzerland and over the then Prussian State Railways. Although it had shortcomings, mainly because of the direct transmission, the locomotive had far reaching results, for it led to the first real investigation into what oil-engined units could offer and how they might be built.

The Diesel-Electric Railcar

Sulzer also had a hand in the next development, in 1914, when five 200-h.p. diesel-electric railcars were built, three for the Prussian State and two for the Saxon State Railways. The Prussian vehicle could be driven from an attached control trailer—the forerunner of a principle still in vogue. Because of the 1914-18 war, these units were dismantled after limited service; but when in 1932 the Val de Travers Railways (Switzerland) ordered railcars, many engine components of the Saxon cars were built into newly-developed direct-injection engines. These Sulzer engines, incidentally, were the first of the direct-injection type in railway service. One of these vehicles is still in existence as a stand-by unit, and it is believed that some of the engine components may date back to 1914.

This record of longevity is not, however, an isolated case as far as Sulzer is concerned. In 1932 three 330-h.p. Bo-Bo diesel-electric shunting locomotives were delivered to the Port of Rosario,



One of the 6LDA28 Sulzer 1,160-h.p. engines coupled to a B.T.H. generator group



The 100th Vickers-built Sulzer engine for British Railways loaded on a railway wagon at Barrow for dispatch to Crewe Locomotive works and, right, members of the party examining engine components include, in the front row (left to right): Mr. W. J. A. Sykes, chief mechanical and electrical engineer, Southern Region; Mr. S. B. Warder, chief electrical engineer, B.T.C. (B.R. Central Staff); Mr. R. F. W. Keay, works manager, Vickers-Armstrongs (Engineers), Limited; and Mr. J. F. Harrison, chief mechanical engineer, B.T.C. (B.R. Central Staff)

engines were mostly 16-cylinder, horizontally opposed types developing 600 b.h.p. at 400 r.p.m. Although successful, they were dangerous, because of highly inflammable fuel; experiments were therefore carried out on diesel engines for submarine propulsion. A result was the D-class heavy oil engines constructed between 1910 and 1912 which had six vertical cylinders of 14½-in. bore and 15-in. stroke; these units developed 600 b.h.p. at 380 r.p.m.

These engines were the prototypes of the E- and L-class engines constructed between 1913 and 1919, all of which had plate columns with riveted-on heads and feet, and forged steel bedplate girders fore and aft with bolted cast steel cross girders carrying the bearings. This made for an exceptionally light engine, but it depended upon a stiff ship seating (which is inherent in a submarine). The majority of the British submarines of the 1914-18 war had engines of this type, built by 20 firms under licence from Vickers. The early D-class engines had blast air injection and it was at this time that Vickers developed the "solid" fuel injection system, from which the modern "jerk" pump injection is derived.

Traction Development

Vickers also essayed into the diesel railway traction field by building in 1925 an oil engine for

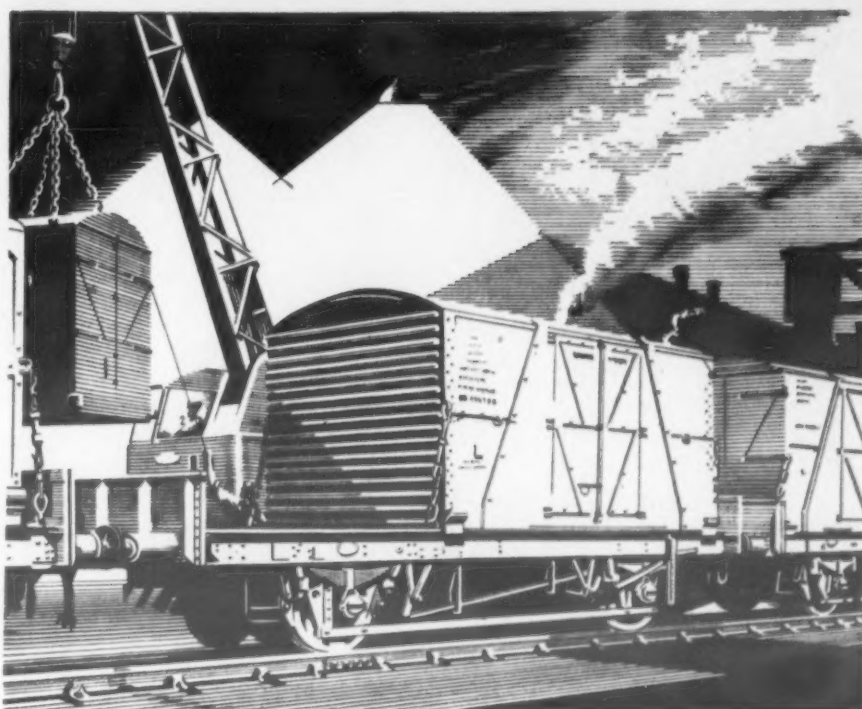
Argentina. These Sulzer-engined 58-ton units are still in service at the original site. Other long-service Sulzer-powered units on the South American continent which are still in operation include four double-bogie 270-h.p. railcars delivered to the then Buenos Aires Provincial Railways in 1935, and one articulated four-car train on the Santos-Jundiahy Railroad (the former San Paulo Railway of Brazil) delivered in 1933. Nearer home, six of the 11 400-h.p. shunters built by Armstrong-Whitworth for the L.M.S.R. over 1934-6 are believed to be still in service in Belgium and this country.

Higher Powers

In 1938, two designs of powerful twin-unit diesel locomotives were placed in service, one each on the Roumanian State Railways and the French National Railways. These 4,400-h.p. locomotives were each powered by two double-bank engines delivering 2,200 b.h.p. at 700 r.p.m.; these engines were the forerunners of the present 12LDA28 design now being supplied for 147 British Railways Type 4 locomotives of 2,300 or 2,500 b.h.p. at 750 r.p.m.

On the basis of results with its locomotive, the S.N.C.F. decided to obtain 35 single-unit locomotives of 2,000 h.p. with Sulzer double-bank engines for the Grande Ceinture freight line around

(Continued on page 14)



"CONDOR" Freight Expresses speed delivery on

Operating on the London Midland Region of British Railways, the "Condor" Freight Express service came into operation on March 16th. "Condor" Freight Express trains will run to a regular timetable between London and Glasgow.

For speed, reliability and ease of maintenance, the container-carrying vehicles—modified 22 ton plate wagons—are all fitted with SKF spherical roller bearing axleboxes.

SKF

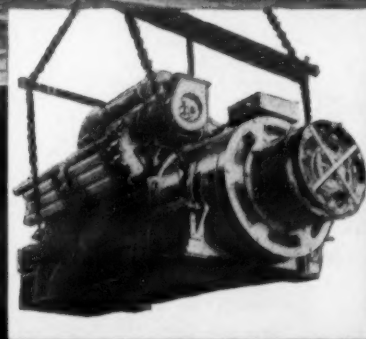
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RS4a



G.E.C. generator made in the new G.E.C. Traction Works at Dudley Port, coupled direct to a Paxman 16VHXL diesel

GREAT POWERS PULL TOGETHER

When the ten new 800 B.H.P. Eastern Region GEC North British diesel electric locomotives gather speed to 60 miles an hour, G.E.C. gear and circuits control the power.

G.E.C. and North British are two great companies that have pooled their extensive resources, technical knowledge, and engineering skills to build these rugged general purpose locomotives and help keep British Railways light passenger and medium goods trains rolling—and on time.

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Magnet House, Kingsway, London, W.C.2

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LIMITED OF SCOTLAND
Springburn, Glasgow, N.1

COAL DISTRIBUTION IN SOUTH LONDON

New Railway Depot in Southwark

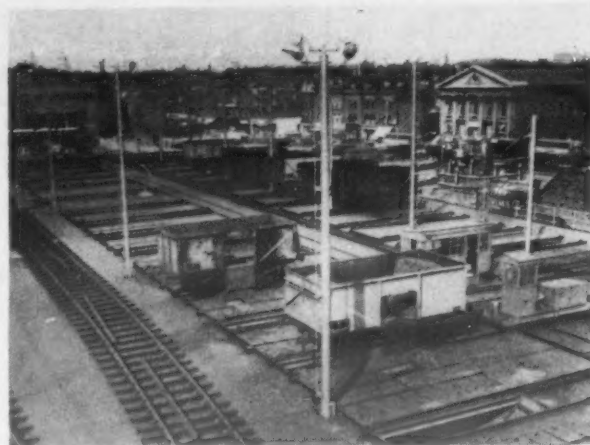
OPENING on September 21 of the rebuilt Walworth Road which will modernise deliveries of solid fuel to South London, has already been mentioned in MODERN TRANSPORT. Situated in the Borough of Southwark just south of Elephant and Castle on the former London, Chatham and Dover line from Blackfriars to Loughborough and Herne Hill, the new depot, which replaces a 65-year-old establishment, has been built for the Southern Region of British Railways to handle smokeless fuel as well as coal. The train service to it is worked forward from Brent through the widened lines by the London Midland Region. It was formally opened by Mr. D. J. Ezra, National Coal Board

sales chief for London and the South of England.

The new equipment and layout will help solve one of the biggest problems of the coal trade—dealing quickly with sudden urgent demands from householders during cold “snaps.” Nearly 70,000 tons of fuel a year is the estimated throughput; the delivery radius is up to 10 miles by motor vehicle and about 50,000 South London homes will be served. There is a continuing demand for solid fuel in the area, and bottlenecks at the old depot were a serious matter for many householders and flat dwellers who have nowhere to keep their own stores of fuel.

The former depot was built by the Midland Rail-

way Company to develop the sale in South London of coal from collieries served by that railway and was transferred from the London Midland Region to the Southern Region on May 1, 1950. The Midland policy of establishing depots on other railways for coal sales even extended to opening a depot on the London, Chatham and Dover at Maidstone in the latter part of the 19th century. The Walworth Road site is on the down side of the line from



View of rebuilt Walworth Road coal depot showing traverser and chute openings

Holborn Viaduct to Loughborough Junction, south of Elephant and Castle Station. The former depot was a timber superstructure with iron and timber supports which by 1958 urgently needed renewal. It was decided to replace it completely with an altered layout.

Taken into account in the decision was the fact that coal sales in the area might decline, but it was felt that the demand for solid fuel as a whole in this area would continue for many years to come. Nevertheless, future legislation might mean that the depot would handle large quantities of smokeless fuel and this was borne in mind in the design of the new layout.

Usefulness of Site

To summarise the other features for rebuilding on this site:

- (1) The depot supplied more than 50,000 customers.
- (2) The bulk of these customers had to depend upon current supplies because they had no accommodation for storing fuel.
- (3) Consequently, any disruption in the provision of current supplies would be serious.
- (4) Walworth Road depot was regarded in the coal trade as being the most important coal depot in London for the supply of domestic fuel.
- (5) The merchants attached much importance to the chute facilities available at the depot, which quickened wagon unloading by six or seven times compared with the speed of unloading at a flat siding depot.
- (6) If Walworth Road had to be replaced by one or a series of flat siding depots, six or seven times more siding accommodation would be required, together with a considerable increase in the labour strength necessary for bagging, weighing, etc., which latter commitment the trade felt they could not face because of the difficulty in recruiting labour for this type of work.

One of the basic requirements of the depot was speed in unloading from wagons to road vehicles. The old depot and the new were both based on the difference in height between the railway and the road. The running lines at this point are carried on brick arches 20 ft. above ground level so that coal can be discharged from bottom-door wagons into hoppers through chutes into bags for weighing before loading on to road vehicles. There are also some straightforward coal drops to the coal storage areas.

Reconstruction

The reconstruction of the depot on a like-for-like basis, with reinforced 24½-ton wagon capacity structures instead of timber would have cost some £400,000 at 1956 prices. Such a proposal, however, would not have been satisfactory as the arrangement in the unloading bays, with three wagons, one over a slip and two others over hoppers, delayed the clearance and dispersal of wagons, because of the partial unloading of wagons which occurs when there is insufficient space in the hoppers; because disposal of empty wagons is delayed until the respective wagon next to the traverser line is available for removal; and finally, because of the presence of cripple wagons.

A layout with a traverser positioned centrally between two rows of unloading bays has, therefore, been adopted to overcome the difficulties. This arrangement enables individual wagons to be handled as quickly as they become available: cripple wagons can be withdrawn and transferred easily to a cripple siding. Economy suggested that a new depot with improved layout could function without “slip” facilities and one-third of the previous hopper accommodation.

Layout Adopted

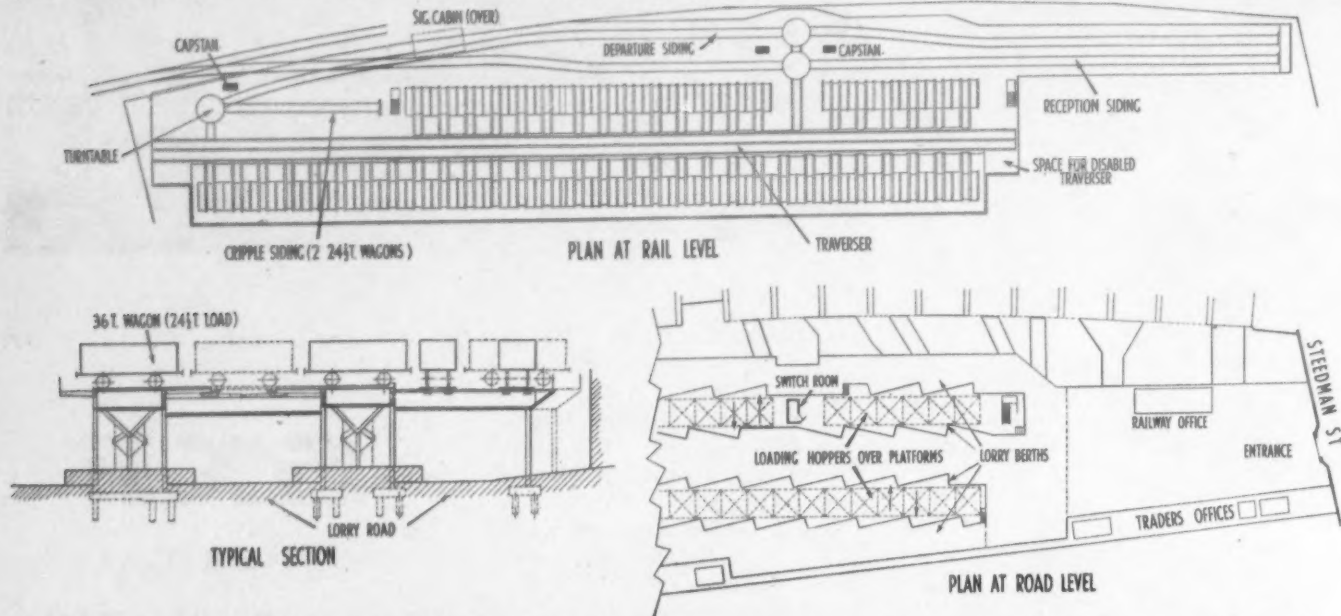
The new depot, therefore, comprises two sidings—reception and departure lines—at rail level with a capacity to hold 20 16-ton wagons each. The sidings are connected to the down line at the country end of the depot. There is a cripple wagon siding to hold four wagons at the south end. Three hand-operated wagon turntables are provided; two are installed in the main sidings and the other serves the cripple siding. There are 50 transverse unloading bays arranged in two rows of 20 and 30 bays respectively.

Two electric traversers are each equipped with a capstan and capable of transporting one wagon of up to 36 tons gross weight. Only one traverser is used at the one time; the other will be held as a spare against breakdowns, etc. To move wagons there are two capstans with fair leads adjacent to the reception and departure sidings. At ground level two series of sawtooth loading docks are served by the 50 hopper chutes. There are circulating cartroads leading to and from the Steedman Street end of the depot. There is a weighbridge office and 30-ton weighbridge, railway offices and some amenities for railway staff, and a set of offices for the various coal merchants.

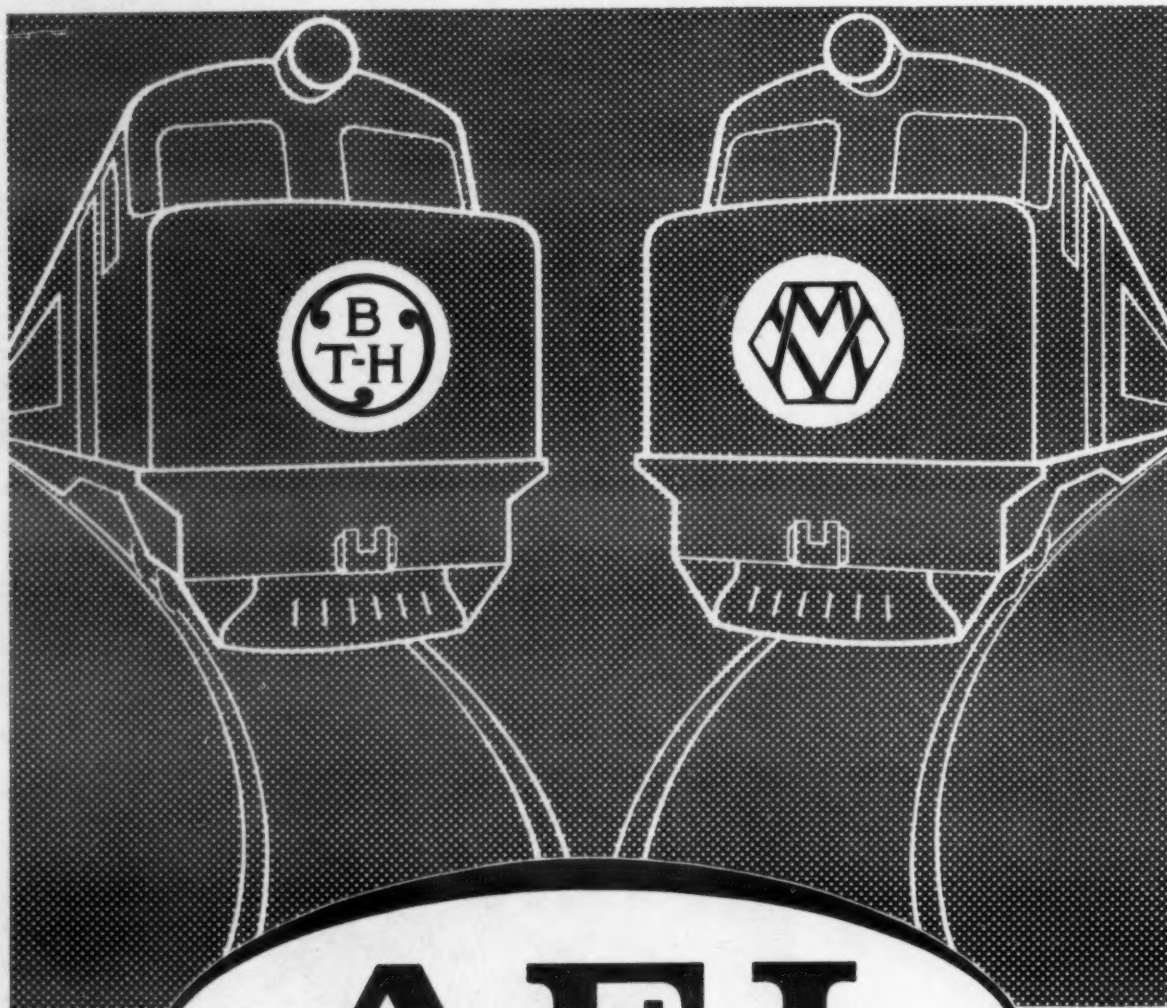
STAINES BY-PASS

Work to Start

IT was announced this week by the Minister of Transport that work is to start on October 19 on the construction of the Staines by-pass. A new bridge is to be built to carry the by-pass over the Thames at Bell Weir, about one mile to the west of Staines and adjoining Runymede. The bridge will be 414 ft. long, with a main span of 174 ft. over the river. Initially it will have two 24-ft. carriageways, but has been designed to take two 36-ft. carriageways when, as mentioned subsequently, it also becomes part of the North Orbital Road. The contract for the bridge has been let to W. and C. French, Limited, for completion in 21 months, and roadworks in Middlesex will be carried out by Richard Costain, Limited.



Layout of Walworth Road coal depot, Southern Region, showing track layout at upper level, section through bunkers, and part of ground level arrangements



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THE SEARCH FOR LOADS

Problems Facing Airlines

DIRECTOR-GENERAL'S REPORT TO I.A.T.A.

THE 15th annual general meeting of the International Air Transport Association opened in Tokyo on October 12 when Mr. Seijiro Yanajita, president of Japan Air Lines, assumed the presidency of I.A.T.A. in succession to Mr. J. R. D. Tata, chairman of Air-India International. Presenting his annual report the director-general, Sir William P. Hildred, began by reviewing the traffic statistics for 1958.

While total performance of all world airline operations slowed down during 1958 and showed only small increases over 1957, purely international operations remained much more buoyant. International air traffic of all kinds increased 14.8 per cent in 1958 as against 16.4 per cent in 1957. Passenger traffic was up 12.4 per cent and cargo increased 12.5 per cent for the year. At the same time intra-European passenger traffic rose 9 per cent and North Atlantic passenger carryings increased 26.8 per cent under the impetus of the new economy fares to a record total of 1,292,166. "As I anticipated last year," Sir William added, "1958 saw more passengers flying the North Atlantic than crossing by sea."

An Ebullient Curve

Reporting that traffic for the first seven months of this year was "rising on an ebullient curve for both international and U.S. domestic operations," he said, "the recession in the United States and Canada is over. While it broke our forward stride for a moment, it did not cause us to lose much ground. It proved once again that air transport is sensitive to fluctuations in the trade cycle, perhaps the more so in areas where air transport is most highly developed."

A year ago he had reported estimated figures showing an operating profit of 1.2 per cent but the revised final figures issued by I.C.A.O. for 1957 had shown an actual operating loss of 1 per cent. Estimates for 1958 showed a further deterioration. Although total operating revenues went up to \$4,200 million, operating expenses soared even higher to \$4,630 million. World airline operations

it was clear that it had created its own market. This pointed to the moral that their markets were inexhaustible so long as they kept the fares down.

"If an attractive product is priced low enough, there is no limit to the amount which can be sold. If it is priced too low, there is a limit, which is called bankruptcy. While air transport pricing must contain an element of commercial risk, pricing down ahead of demand in order to cultivate it, it is no exception to this rule—without massive subsidies which governments are singularly unwilling to press on us. Our problem, then, is to attain the highest possible economy of operations as the basis for the lowest possible price; and then to squeeze the greatest amount of traffic out of whatever market that price level enables us to exploit."

Operating Restrictions

The airlines' ability to keep fares down was currently being threatened by military blockage of the upper air space and the tendency of governments to increase charges for the use of airports and en route facilities and services. The tendency of the military to close off large areas of upper space from civilian traffic forced jets to operate over longer tracks or at altitudes which increase their fuel consumption, thereby reducing payloads and increasing costs, he said.

While the military authorities had been more understanding and helpful in recent months in finding solutions to the problem over the North Atlantic and the European continent, Sir William declared that "this goodwill has been of slow growth and is being outpaced by developments. The introduction of civil jets in large numbers by the summer of 1960 will accentuate the problem, and I appeal to administrations and military authorities to minimise these penalties and restrictions."

Airport Charges

"The airlines are not in a position to absorb the present rates of charges for the use of airports and en route facilities and maintain the barest minimal

SCHEDULED TRAFFIC OF I.A.T.A. MEMBERS—PERCENTAGE OF ANNUAL INCREASE—1950-1958

	1950	1951	1952	1953	1954	1955	1956	1957	1958
Passengers carried	14.8	23.2	13.5	20.1	12.7	16.4	15.8	10.2	7.3
Kilometres flown	5.1	8.8	12.6	13.6	7.4	11.1	12.0	10.1	8.6
Cargo tonne-km.	26.2	9.3	7.6	13.0	8.9	14.6	16.1	9.3	21.5
Mail tonne-km.	11.4	19.3	9.5	9.6	17.5	13.9	10.1	4.9	10.3

were, therefore, in the red by about \$160 million, or 3.7 per cent for 1958. These were, admittedly, figures for all the world's airlines by the I.C.A.O. definition and I.A.T.A. members were a smaller group with better operating results.

Still No Increased Profit

Furthermore, like the traffic results of the year, the financial outcome must be weighted to allow for what now appeared to be non-recurrent developments peculiar to the United States domestic sector. It was estimated that strikes cost the U.S. airlines about \$23.3 million in operating revenues last year and that the recession probably shrank their revenues about \$200 million below normal expectations. "On the whole, therefore, I think we can assume that the final results of international operations in 1958 were closer to breaking even. In itself, this is nothing much to shout about, for even if we have avoided excessive operating losses, we have not been able to accumulate the new additional percentage points of operating profit which are vital to economic health."

They had, however been through times as hard or even harder. The bad years of 1947 and 1948 were also years of comparatively massive re-equipment with better productive machinery which made the profits of the succeeding years possible. This re-tooling was a major financial factor in 1958.

Current figures indicated that more than 300 jets would be put in the hands of the airlines by December 31, with delivery of another 200 or so phased along to the end of 1963. There were no comprehensive figures on the disposal of older aircraft which had become surplus to the needs of the airlines. A good many sales had been made, but many of the aircraft involved had stayed within the scheduled commercial field, being transferred from one operator to another, with older and smaller types passing outside to non-scheduled and other types of flying. The existence of more equipment than was needed for the peak demands of summer operations seemed at this point to have made charter operations, particularly across the North Atlantic, heavy and competitive among scheduled operators this year.

A Memorable Year

The past year would be memorable for two developments, the jets and economy fares or, to put it another way, for the combination of a highly productive aircraft with a really low fare service. Whether the mixture was in the right proportions remained to be seen. Despite the fact that the jets had so far been few in number, they had already made an indelible mark. Wherever they had gone into service they had been booked to capacity. That was only to be expected, but the way in which they had dramatised man's new ability to go where he pleased and the massive advertising campaign with which they had been launched had given a fillip to traffic over the same routes in other types of aircraft.

By the time of the annual meeting next year, in Copenhagen, the jet would be producing more than half of the industry's payload offering. The novelty and splendour of performance would still be there, but there would also be capacity of an order which the industry had never been called upon to fill before. In 1958 they carried more traffic than ever before yet ran less than 60 per cent full. When it was appreciated that each jet which came into operation was the productive equivalent of three DC7Cs it was possible to gather what lay ahead. "We shall have to feed progressively larger gobbets of traffic to these monsters, or they will eat us up, capital and all."

Economy Fares

That was where economy fares came in. They were the end result of a long drive toward setting up a class which offered transport, stripped of frills, at the lowest possible price. No doubt a good many passengers who would otherwise have flown tourist chose economy class at a lower fare, but equally

margin of profit," he declared. "If, not withstanding this, governments charge us, we must pay. But I would remind them that the more we pay, the less we shall be able to do to maintain their communications and bring them the benefits of tourism and commerce. We may not be geese, but we can lay golden eggs—so long as we are not starved out of production."

Urging the airlines to base their future planning on deeper and more comprehensive economic and market research, the director-general remarked that such projects as Air Union and equipment and commercial co-operation established between other carriers "have all proceeded from the inexorable logic of economics. They will all improve the economic position of their participants. But they do not exhaust the possibilities; and others would benefit from a searching look at their own situations."

Freight Capacity

In 1958 the world's airlines flew some 1,704 million tonne-km. of cargo. Over the North Atlantic there was a pleasant annual increase of 22 per cent in cargo carryings; but on the worldwide basis 1958 loads generally went up by only 1 per cent over the previous year, as compared with an annual increase of 9 per cent in 1957 and 14 per cent in 1956. A very large amount of cargo space went unfilled. Admittedly 1958 was an unusual year and what they knew about 1959 indicated that it would be better, but so far as cargo was concerned it would not be good enough.

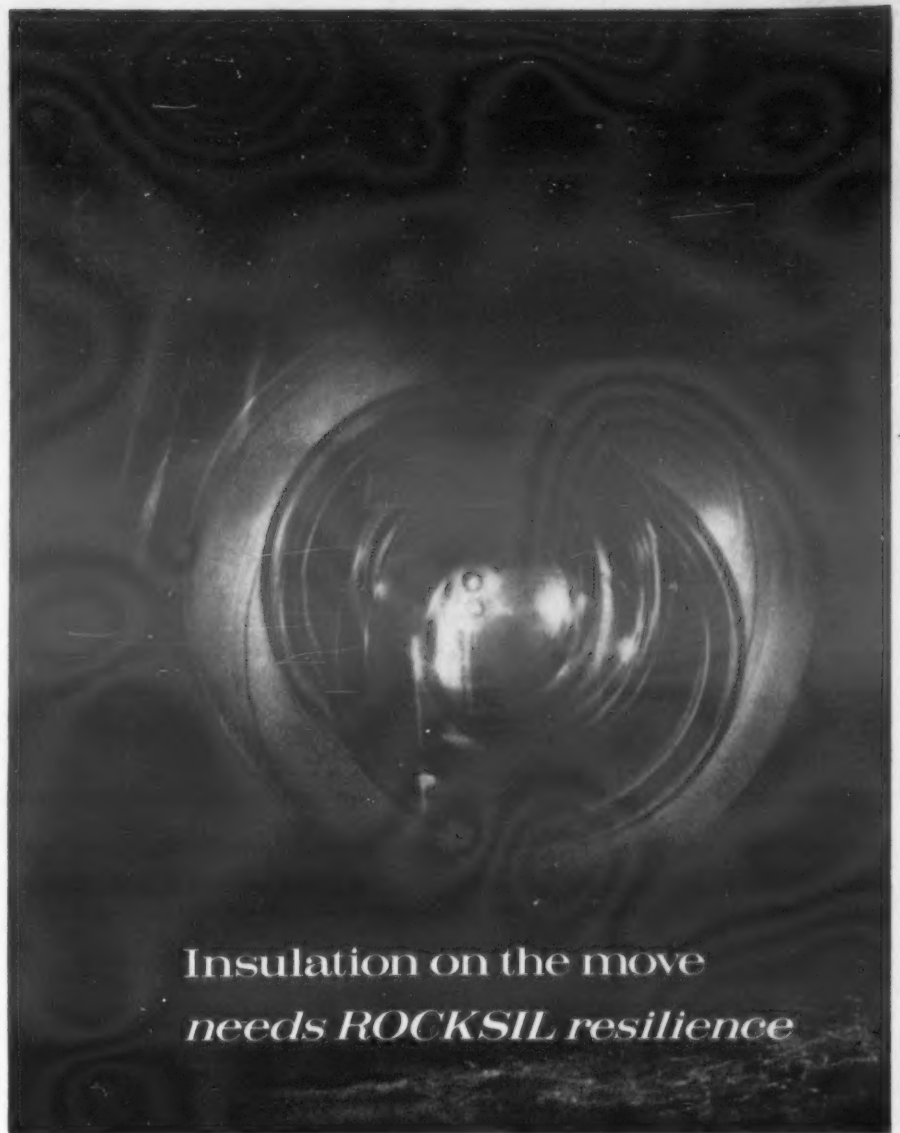
Cargo space offered in both mixed and all-freight aircraft would increase enormously over the next few years. Over the North Atlantic it would be doubled and on other routes whilst the increase might be less than that, it would be equally serious in portent. "Considered against the amount of cargo moving by all forms of transport the capacity we may offer may be small, but the amount of space we shall sell by our present rating systems and sales appeals will be smaller still. This presents airline managements with a greater challenge for the next decade than any in the passenger field."

Traffic Conferences

Of the work of the I.A.T.A. traffic conferences, through which the airlines recommend international fares and rates for government approval, Sir William Hildred said: "I am confident of the ability of this worldwide industry to continue to work out its salvation year by year through voluntary association, by considering its commercial problems in the non-political atmosphere of the traffic conferences, and within terms of reference from governments which do not inhibit them from exercising their intelligence and knowledge in finding answers to problems which are ever changing."

Worldwide international agreement on fares and rates will never be popular. From time to time some nation or some airline, proud of its achievements, will resent the fact that it cannot get everything it wants because 90 others have a say in the matter. That is only human. A man who has just bought a powerful sports car may feel the same way about traffic regulations which limit the speed at which he may travel—unless he is really civilised and then he doesn't.

"We must expect, from time to time, competitive friction. But this is not a bad thing. It will make for better airlines and a better service." Such government-imposed limits on competition as capacity restrictions, were doctrines which would do more damage to the industry than the conditions they were designed to cure. "We all know what happened to grandma with her tight stays," he said. "She swooned every 20 minutes and faded away at 50. Whatever the future holds in store I am certain we possess the means to assure that it can be a bright one for the public, the airlines and the industry as a whole, and one which provides an opportunity for every country and every airline to enterprise honourably and to the full extent of its capabilities."



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NEWS FROM ALL QUARTERS

North Eastern Region Closures

Passenger facilities will be withdrawn from Holmfirth and Thongs Bridge stations (the Holmfirth branch) on and from November 2. Scotby Station, on the Newcastle-Carlisle line, closes on the same date.

Haifa Underground in Service

The first underground line in the Middle East, the Carmelit line in Haifa, Israel, was opened to operation on October 6. It takes its name from the fact that it runs from the lower part of the town to the top of Mount Carmel. There are four intermediate stations on the 1½-mile line. The line was built by French engineers and the stock runs on pneumatic-tyred wheels. The official opening takes place later this month.

Computer at C. and W. Works

Tests are being made with an Elliott 405 electronic computer in Wolverton carriage and wagon works accountants office which, when put into operation will, step by step, take over the accountability of the department. The installation is the first one of its kind on British Railways. It involves new techniques in programming routine clerical work for submission to the computer.

Plaistow Rail Realignment

On October 11 railway engineers were engaged on the task of lowering the level of the rail tracks under the Northern Outfall Sewer bridge at Plaistow in order to provide the clearance necessary for the overhead wires for the electrification of the London, Tilbury and Southend Line. The London Transport District Line train service between Bow Road and Upton Park was suspended all day and there was a special service of steam trains calling at the intervening stations, Bromley, Plaistow and at Upton Park.

Advisory Service for Overseas Railways

United Kingdom delegations to past sessions of the rail sub-committee of the Economic Commission for Asia and the Far East have observed that although the valuable and extensive programmes of work approved at each session deal with many diverse aspects of railway operation, there are many other subjects upon which information would be helpful to the railways of the region and which cannot be included in the programmes of work. Furthermore, individual railways may have their own special problems on which assistance would be welcomed if it could be provided. Consideration has therefore been given to the means whereby the United Kingdom could further assist these railways and contribute to the successful work of the rail sub-committee by providing information and advice on particular technical, economic and commercial problems. In consequence a railway advisory service has been established in the United Kingdom to enable the railways to draw upon the wide and varied knowledge and experience which is available in Britain partly as a result of the B.T.C. modernisation. Its address is: the United Kingdom Railway Advisory Service, International Inland Transport Branch, Ministry of Transport and Civil Aviation, Berkeley Square House, London, W.1.

Station to Close

A London Midland Region station, Pilsley, between Hucknall Central and Chesterfield Central, is to be closed on and from November 2 to all but private siding traffic. Seaford and Litherland, Entwistle, and Ewood Bridge and Edenfield goods stations are to close from the same date.

Fares on Minor Railways

The Independent Undertakings (Railway Passenger Charges Scheme Application) Order, 1959, which came into operation on October 16, extends to all independent statutory railway undertakings carrying passengers the power to make the same charges as are authorised for the B.T.C. under the current charges scheme.

Fire Engines to Have Dual-Tone Horns

In order to give adequate warning to drivers of vehicles with enclosed cabs Derby Fire Brigade has decided to equip its fire engines experimentally with dual-tone horns, supplementing the warning bell. The horns are extremely directional and penetrating in effect, but they will be sounded "with discretion," the chief fire officer promises.

Railway Daniels at Exhibition

Modernisation assisting in air purification will be the theme of the British Railways exhibit at the International Clean Air Exhibition at the Seymour Hall, London (October 20-22). There will be a display of photographic enlargements and type-script illustrating how railway modernisation can aid the clean air scheme by dieselisation, electrification, the installation of modern heating appliances—staff instruction in the most efficient methods of reducing smoke from steam locomotives.

Names for Locomotives

Two steam locomotives on the London Midland Region, hitherto nameless, have now been fitted with nameplates. Britannia class locomotive No. 70046 is now *Anzac* and Patriot No. 45528 *REME*. The former name was suggested by an enthusiast in Leith who was inspired after watching the Anzac commemorations on television and the latter by a Southern Region signaller, an ex-member of R.E.M.E.

Eastern Region Closures

The Eastern Region announces that on and from November 2, passenger and freight service will be withdrawn between Beccles and Yarmouth South Town via Belton and Burgh. The intermediate stations Belton and Burgh, St. Olaves and Haddiscoe High Level will be closed to all traffic. Aldeby Station will be closed for passenger traffic. Passengers between Beccles and Yarmouth South Town will be catered for by the alternative route via Gorleston-on-Sea. Aldeby will be served for freight traffic by means of a spur from Haddiscoe High Level via Fleet Junction. The line between Clarlborough Junction and Sykes Junction will also be closed to all traffic. The three stations situated on the line—Leverton, Torksey and Cottam—will all be closed and passenger trains between Lincoln Central and Retford will run via Gainsborough Lea Road.



Pressed Steel help modernise railways at home and abroad

Pressed Steel Company are engaged in the quantity production of Diesel Railcars for the British Transport Commission. These coaches are part of the railway modernisation programme for British Railways, and the order is a tribute to Pressed Steel's outstanding record. In the last eight years Pressed Steel have supplied 80,000 new wagons and more than 800 units of coaching stock. They have produced a wide variety of wagons for different gauges for railways at home and overseas.

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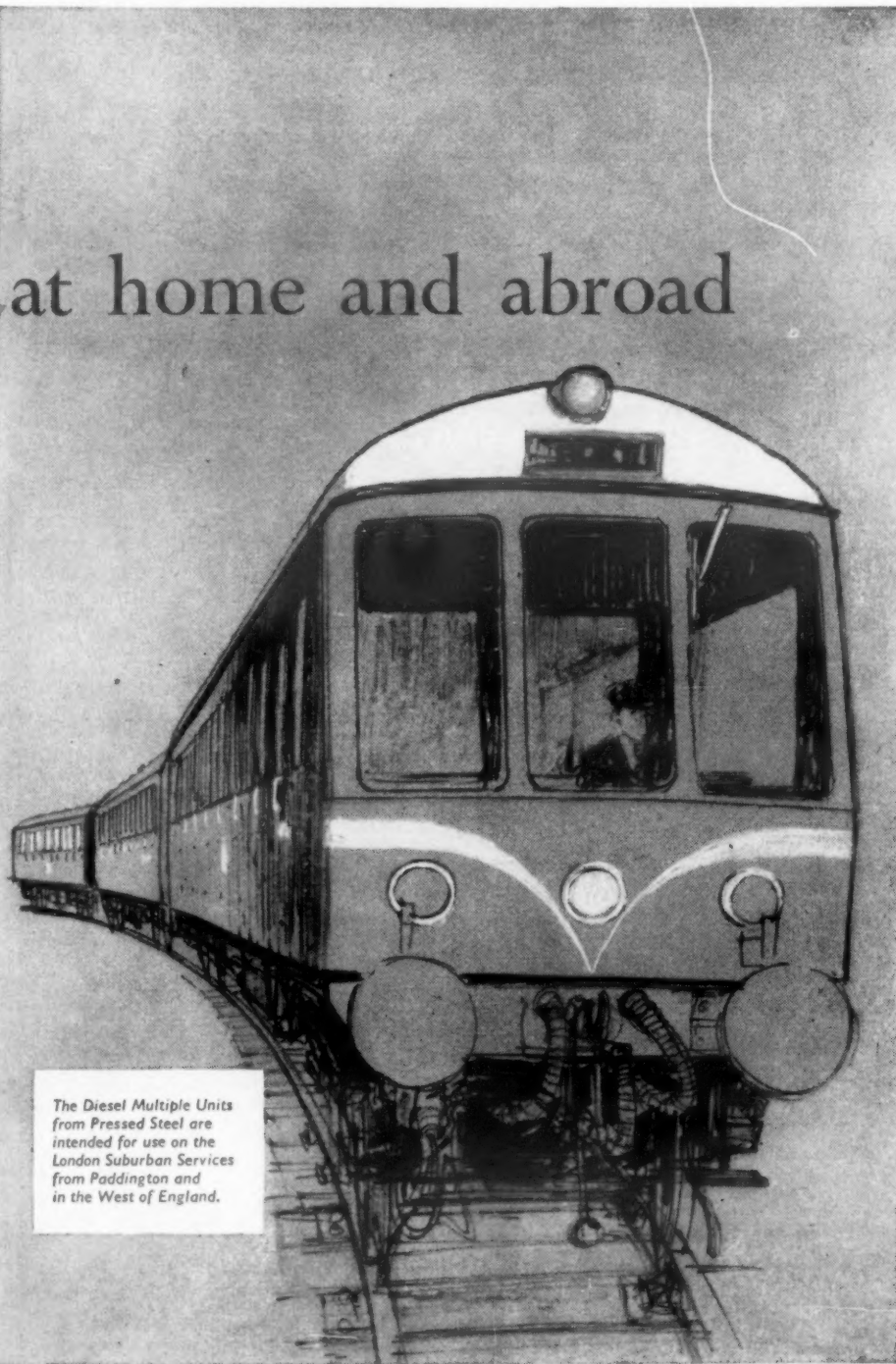
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COMMERCIAL AVIATION

B.E.A. Summer Profit

AUSTRALIAN PROSPECTS

IN his latest letter to the staff, the chairman of British European Airways, Lord Douglas of Kirtleside, says that the corporation made a clear profit of more than £4,500,000 in a record six-month summer season, although "We must, of course, expect to lose a large part of this profit during the coming relatively slack winter months—but, even so, we should, if all goes well, emerge from the full financial year with a substantial profit." In every way 1959 was a record summer for B.E.A. "During the summer we carried more than two million passengers some 750 million miles at the high load factor of 73 per cent. This was a marked improvement in passenger load factor compared with the 65 per cent averaged during the summer of 1958. Capacity offered for sale this summer totalled 115,000,000 capacity ton-miles and of this we sold 80,000,000 load ton-miles at an average overall load factor of 70 per cent. Traffic during the period was, in fact, about 20 per cent more than in 1958. This in spite of the fact that we were able to offer an increase in capacity of only about five per cent." In calculating the April to September summer profit of £4,500,000 full allowance was made for deduction of interest on capital.

B.E.A. may have scheduled helicopter services flying within the next two years "if the difficult question of financing the operation can be resolved," writes Lord Douglas. Disclosing a proposal for an interim helicopter service to lead-in to later Rotodyne operation, he says "We should probably require a couple of 20 to 25 passenger multi-engined helicopters, in the class of the American Vertol V107 and Sikorsky S61 or British Bristol 192C."

Aeroflot IL-18s on London Route

Aeroflot is to withdraw its TU-104 twin-jet airliners from the Moscow-London route for the winter and replace them with IL-18 turboprop machines from November 1.

I.A.T.A. Fares Contrasts

The traffic conferences of the International Air Transport Association, which met in Honolulu prior to the annual meeting of the association in Tokyo, were unable to reach agreement on the introduction of economy fares on the Pacific and Far East routes and it may well be necessary to resume the conferences after the annual meeting ends. In contrast airlines in Europe have agreed to substantial reductions, subject to Government approval, and British European Airways has fore-shadowed fare reductions next spring and summer of from 15 to 25 per cent on a number of its routes.

Reduced Fares on Channel Air Bridge

Substantial fare reductions of as much as £5 on a medium-sized car and £14 on the largest cars have been made on the Channel Air Bridge vehicle ferry services from Southend to Calais, Ostend and Rotterdam this winter. This is the third consecutive year that Channel Air Bridge has reduced its fares since the service started five years ago. These fares will apply until May 31, 1960, and in some cases the rate for cars is lower than the rate by sea. Channel Air Bridge has carried 19,000 vehicles and 93,000 passengers and so far crossed the Channel 10,800 times in 1959.

American Airlines Freighters

American Airlines has announced that it has taken delivery of the first of 10 of its Douglas DC7 air liners to be converted to DC7F freighters. The total cost of the modification programme which is being completed at the Douglas Aircraft plant at Santa Monica is \$4,250,000. Five of the big new freighters will be flying for American by the end of the year and all 10 will be delivered by August, 1960. The first of the DC7Fs is now being used to supplement present DC6A air freighter schedules between Newark, Detroit, Chicago and Dallas. In late October, when additional machines join the fleet, the aircraft will be introduced over the trans-continental routes.

Future Aircraft for T.A.A.

The Government-owned Trans-Australia Airlines is likely to buy £25 million worth of jet air liners from the British aircraft industry between 1963 and 1966. The chairman of the Australian National Airlines Commission, Mr. Warren McDonald, said tonight that the Vickers VC11 and the Avro DH121 appeared to be the only aircraft becoming available at that time which satisfied T.A.A.'s requirements. Mr. McDonald, who has just returned from two months overseas, said that pure jets would replace turboprops on all inter-state services by 1966. Mr. McDonald said that the VH11 and the DH121 seemed a more logical replacement than the American Douglas, Lockheed or Convair aircraft.

Canadian Troops Moved by Air

Rotation of Canadian troops in Germany by air was begun recently when 75 soldiers boarded a chartered Trans-Canada Air Lines Super Constellation in Ottawa to start the operation. They were the first of 1,800 soldiers scheduled to cross the North Atlantic by T.C.A. aboard 12 return charter flights from Ottawa, Montreal, Fredericton and Greenwood to Dusseldorf. It is the first large movement of troops by air since the 27th Canadian Infantry Brigade Group arrived in Germany in 1951, and the largest peacetime airlift of Canadian troops by a commercial carrier. Another 952 troops will be carried by the Royal Canadian Air Force, while the remainder of 15,000 soldiers and dependents of the 4th Canadian Infantry Brigade Group will be moved by ship by mid-December.

Bookings Heavy on P.A.A. Jet Routes

Jet travel continues to be popular on all the routes where the new aircraft have been introduced, it is reported by Pan American World Airways. On the polar route from California to Europe, advance bookings are 190 per cent higher than they were last year at this time. The airline introduced jets on the route on August 21. East-bound transatlantic traffic, which usually declines after the June-July peak, increased by 44 per cent during the four-week period ending in mid-September, compared to the same period last year. Advance bookings for this route are up 114 per cent for the de luxe and economy service combined and 137 per cent for economy alone over last year. Bookings to Hawaii and Tokyo, to which P.A.A. started jet service on September 5, are up 106 per cent over last year and bookings on long-haul flights to South America, to which the airline started a weekly jet service in July, are up 31 per cent.

PRESIDENT OF THE M.P.T.A.



A. F. Neal

Mr. A. F. NEAL, B.Sc.(Eng.), A.M.I.E.E., M.Inst.T.

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It was particularly appropriate that the election of Mr. Albert Frederick Neal, general manager, Manchester Corporation Transport Department, as president of the Municipal Passenger Transport Association should, as already recorded in MODERN TRANSPORT, have taken place at Edinburgh, where he was depute transport manager from 1938 to 1946. Now aged 59, he was educated at Spalding Grammar School and at King's College, London, where he took a B.Sc.(Eng.) Honours degree after a short interruption in his training occasioned by army service in 1918. He then went as a student apprentice from 1920 to 1922 in the Dick Kerr works of the English Electric Co., Limited, and was thereafter appointed an assistant designer in traction control gear for railways and electric road vehicles. Subsequently he became technical engineer for tramways, trolleybuses and the bodybuilding works and was later made assistant to the works manager. In 1931 Mr. Neal joined Manchester Corporation Transport Department as senior assistant engineer, later becoming assistant chief engineer, and during his seven years in those posts was actively concerned in the changeover from trams to buses and in the introduction of trolleybuses to the city. As already mentioned he went to Edinburgh in June, 1938, and when he returned in September, 1946, to Manchester, it was as general manager of the undertaking. He is responsible in that appointment for operating 1,310 buses over 354 miles of route and 137 trolleybuses on 26 route miles of Manchester and adjoining systems. A past chairman of the North Western Section of the Institute of Transport, Mr. Neal became a member of council of the Municipal Passenger Transport Association in 1950. He represented the North Western Area and he has served on many sub-committees in the ensuing years. He was elected vice-president of the M.P.T.A. in September, 1958.

SAFETY CONGRESS

Captain Popkess Speaks

ROLE OF TRAFFIC ENGINEERS

ADDRESSING the 1959 National Safety Congress at Central Hall, Westminster, last week, Captain Athelstan Popkess, Chief Constable of Nottingham, suggested that off-the-highway waiting facilities would undoubtedly make a major contribution to road safety. Such facilities should be as cheap as possible—preferably free—to ensure that the motorist had no excuse for not using them. As multi-storey parks seemed to be the coming thing, perhaps the ground floor could be free for the short-term parker (charging him a fee only if he stayed longer than, say, 30 min.) and the upper floors be reserved for the long-term customer.

Every police force should have a special traffic department manned by specially-trained officers, said a departmental report back in 1947. "In Nottingham we have not only set up such a traffic department, but we have created a special committee of the city council, charged with dealing with all the city's traffic problems and the accidents which spring from them," said Captain Popkess. This committee included the chairman and vice-chairman of the Highways Committee, City Transport Committee, Watch Committee, Street Lighting Committee and Estates Committee. It had done excellent work in such matters as the reduction of traffic congestion, staggering of working hours, revision of waiting restrictions, provision of parking facilities, imposition of speed limits, elimination of accident black spots and a multitude of other matters.

Traffic Department Status

In Nottingham they accepted the principle that traffic control and road accident prevention should have parity with crime prevention and crime investigation. The traffic department and its motorised patrols were concerned exclusively with these duties. Motorised crime patrols were operated by a separate unit. The traffic department was equal in status and size to the C.I.D., and there was ample justification for such a policy in the fact that the annual cost of road accidents—6,000 lives and £190 million in 1958—was immeasurably greater in both human and material terms than that of crime. Such equality of status and size as between the traffic department and the C.I.D. was surely what was envisaged by the words in the 1947 report when it said: "Police resources are required proportionate to the injury which is being done to the community."

Do Accidents Just Happen?

Mr. J. T. Duff, senior engineer in the traffic engineering branch of the Ministry of Transport, described the work of the traffic engineer in relation to road safety. The two things are not at all incompatible, he said; road congestion and the accident record could be reduced at the same time by improvements at black spots. Accidents do not occur completely at random and without apparent cause. Certain manoeuvres will be found to occur more frequently than others, for example most of the accidents at a junction may be found to involve a vehicle emerging from a side road and turning right. On a stretch of road accidents will be found to be concentrated at certain points and are not evenly spread throughout the day or the week. For example, an undue concentration of accidents during hours of darkness may result from unsatisfactory lighting. These facts can indeed nearly always be related to poor features of the design or layout of the junction or road when the analysis has been performed by an engineer whose skill and training tell him what to look for.

Some police officers take a different view of things, Mr. Duff acknowledged. In the introduction to the manual on police driving instruction, for example, the following view is expressed: "These accidents, with rare exceptions, do not occur at any given times and places, but rather in widely scattered areas and at all hours of the day and night. Comparatively few of these incidents can be directly attributed to any particular road feature or vehicle defect." But, Mr. Duff went on, it was instructive to examine as an example a junction with a halt sign where accidents happen to vehicles emerging from the side road. The police may record these accidents as caused by the failure of drivers to observe the sign. This may well be true, but the engineer with his further training in these matters will examine the record further and study the site. As a result some modification of the layout is made and the accidents disappear.

Double White Lines

Speaking of the new system of double white lines, he said it is one of the cases where the traffic engineer has to make some compromise between safety and traffic flow. To overtake a vehicle travelling at 60 m.p.h. on a two-lane road with the possibility of meeting a vehicle travelling in the opposite direction at this speed would require a forward visibility for the overtaking driver of some 2,000 ft. If overtaking were to be prohibited on all sections of our roads where the visibility fell below 2,000 ft. we should have so much of the mileage restricted that normal traffic flow would be seriously hindered (or more probably there would be wholesale disobedience of the lines). On the other hand if the visibility distances were selected with traffic flow only in mind we should not achieve the safety which is the primary aim of the system.

To achieve this compromise an assumption is made which is becoming an increasingly common feature of the traffic engineer's work. This assumption is that under normal conditions about 85 per cent of drivers drive in a reasonable and prudent manner having regard to the particular circumstances and the behaviour of this group of drivers can be used to guide the engineer in his work. In this case we need to know, for each individual hazard, the maximum speed at which these normal prudent drivers will be approaching. The speeds of a fairly large sample of drivers are accordingly measured and that speed below which 85 per cent of the drivers travel is taken as the design speed for determining the length of double line to be laid. This speed is known as the "85 percentile speed."

On our winding roads it sometimes happens that the length of road between two sets of double lines may be comparatively short. The visibility on this length is above the minimum but it may not be safe to overtake if the vehicle to be overtaken is a very long one or if the driver is prevented from overtaking at the beginning of the length. The absence of the double line is not legally, nor in common sense, an invitation to overtake. The presence of the normal lane lines here as elsewhere means only that there is no prohibition and it is

(Continued on page 10)

FORWARD-ENTRANCE LODEKKA

First Single Step Prototype Body

THE development of the Bristol Lodekka vehicle has now been carried a stage further with the completion of the prototype bus—a 30-ft. long double-decker having a flat floor on the lower deck with a single-step forward entrance. This unit will shortly enter Tilling Group service with the Bristol Omnibus Co., Limited. It seats 70 passengers, 32 on the lower and 38 on the upper deck. With a body designed and built by Eastern Coach Works, Limited, it utilises the Bristol FLS chassis powered by a Bristol BVW 8.9-litre diesel engine. A description of the mechanical features appeared in MODERN TRANSPORT of August 29, from which it may be recalled that the chassis embodies a dual hydraulic braking system and rolling diaphragm air suspension of the rear axle.

The body structure follows E.C.W. standard practice, being fabricated wholly from aluminium alloy, the interior panels of both upper and lower decks being a stressed skin secured to the framing by solid riveting. The body structure is closely integrated with the chassis, being built into it rather than on to it. The lower deck floor is composed largely of aluminium plate, secured directly to the chassis main frames and crossmembers, and the vertical pillar members are bolted into open-ended jaws at the outer extremities of the chassis outrigger members. To the rear of the rear wheels, the floor is composed of tongued and grooved boards. The intermediate floor is of resin-bonded plywood in one piece supported on alloy roofstick members, and the upper deck roof is of aluminium

panels also supported on alloy roofsticks and intermediate framing.

Design of Forward Entrance

The forward entrance, which is arranged directly behind the front bulkhead has a single step from the kerb to the interior, the step height being 10 in. from a 5-in. kerb. The staircase leads from the left of the entrance, with a right-angle turn to the upper deck, and allows of twin streams of traffic to upper and lower decks without interference from either. The entrance sliding door is power-operated by compressed air, and is under the sole control of the driver. In an emergency it can be opened against the pressure of air in the system without difficulty, and an isolating valve in the driver's compartment allows the door to be moved freely by hand if required. Access to clutch and gearbox is provided by the lower three steps of the stairwell being hinged upward, and the batteries which are stowed under the stairwell are extremely accessible for maintenance or replacement. Luggage accommodation is also provided under the staircase. Emergency exits for both upper and lower decks are in the rear of the body.

Seats are of the standard tubular steel frame type with foam-rubber cushions and back supports, and stainless-steel top tubes. They are upholstered in moquette and hide. All handrails, stanchions and staircase handrails are of stainless-steel tube with stainless-steel cast brackets. Ample interior lighting is arranged by means of 14 open reflector lamps in each deck, and two similar fittings over the entrance steps. Heating is provided by means of the C.B.C. system, taking warm air from the engine cooling water, the twin radiators being located at the front of the upper deck. Ventilation is by means of fittings over the side and front windows, and extractor ventilators in the roof of the upper deck. Considerable use has been made of glass fibre for components such as the wheelarch seat foot stools, stairwell fender, entrance door, rear corner panels, and front air intakes and discharge louvres.

Small and Parkes, Limited, has opened a new depot at 92 Fonthill Road, Aberdeen. (Telephone Aberdeen 26062), where a full DON relining and replacement service is available and comprehensive stocks of other Small and Parkes products are carried.



The Bristol-E.C.W. Lodekka with single-step forward entrance and, right, a close-up view of the entrance



LONDON to MOSCOW in 45 HOURS!

A FINE ACHIEVEMENT FOR THAMES!

A Thames coach chassis with a Duple body, powered by a Thames 6-cylinder diesel engine, has just completed the fastest-ever coach journey from London to Moscow. Arranged by Ford in association with Excelsior European Motorways Ltd., Bournemouth, the journey of nearly 1,800 miles was covered in record-breaking time, and—including a 5-hour channel-crossing and routine halts at 10 frontiers—at a high average speed. The route from London ran through Dover, Ostend, Brussels, Cologne, Hanover, Frankfurt-am-Oder, Warsaw, Brest-Litovsk

and Moscow, and the passengers spent the flying miles in superb comfort, relaxing in their reclining seats, refreshed with restaurant-like service. Even a library was provided to while away the idle moment in this well-sprung mobile luxury! Never before has such a schedule been attempted, never before achieved. It's another great tribute to Thames chassis and engines, a tribute to the outstanding power and reliability which made this epic venture successful. See your Ford Dealer today for full information about Thames chassis and engines for the best coaches.

Average Running Speed 51.16 m.p.h.

THAMES BUILT BY FORD

SAFETY CONGRESS

(Continued from page 9)

left to the driver's own judgment to decide whether it is safe to overtake or not.

An experiment has been made in the London area during the past two years with a speed limit of 40 m.p.h. On approximately 21 miles of road the speed limit of 30 m.p.h. was raised to 40 m.p.h. The 85 percentile speeds of private cars on these roads varied from 36 m.p.h. to 43 m.p.h. when the 30 limit was in operation. After the 40-m.p.h. limit had been in operation for some months the speeds were again measured and there was no significant change and there was no change in the number of accidents recorded. But this did not mean that a speed limit had no value; during the same experiment some 62 miles of roads which previously had no speed limit had a 40-m.p.h. speed limit imposed. In this case there was a significant reduction in the speeds of private cars and a 10 per cent reduction in the number of accidents. The reduction in fatal and serious injuries was higher—30 per cent. This shows that our normal prudent driver will take notice of speed limits which are reasonably set but will ignore those which are unreasonable.

Counting the Cost

The traffic engineer is more and more making use of economic studies to guide him in his decisions. The procedure is to evaluate in monetary terms the costs of the delays to traffic and the accidents which are occurring, to estimate what savings are possible with a given improvement and to relate these to the cost of the improvement. This technique enables a decision to be made between alternative schemes on the grounds that one gives a better economic return than the other.

The contribution which the traffic engineer is making to road safety may be judged by the average effects produced on a number of changes which have been investigated by the Road Research Laboratory as follows:

Change	Probable average reduction in accidents
No waiting regulations	Per cent
Improvements to street lighting	30
Improvement of slippery roads	35 during hours of darkness
Improved alignment at bends	80 on wet roads
Improved visibility at junctions	70
Provision of roundabouts	30
Staggering of cross-roads	60
Provision of pedestrian guard rails	85
Alterations to rural three-way junctions to making the turning movements less sharp	10 in pedestrian accidents
	50

It has been shown that 60 per cent of the vehicle mileage in this country is run on only 10 per cent of the road network so that a high proportion of the saving in accidents could be achieved by conversion of a comparatively limited mileage of the network. In urban areas it is difficult to say what might be achieved but there seems no reason why the present rate of 800 injuries per 100 million vehicle-miles should not be halved. But such is the rate of traffic growth that if the injury rates are cut to that extent it is possible the total number of injuries on the roads 20 years hence will still be the same as today. That challenge faces all road safety workers.

Forthcoming Events

- October 19.—Institute of Road Transport Engineers (Scottish Centre). Paper by Mr. J. H. Stoneman, "Servicing of Electrical Equipment." At the Three Tuns Hotel, Durham City. 7.30 p.m.
- Institute of Traffic Administration (East Midlands). Paper by Mr. T. Jackson, "Passenger Transport—Voluntary Integration or ???." At Mechanics Institute, Nottingham. 7.30 p.m.
- October 20.—Institute of Transport (Humbly Grove). Paper by Mr. R. B. Stoker, "Ships and the St. Lawrence Seaway." At Chamber of Commerce and Shipping, Hull. 7.30 p.m.
- Institute of Transport. Visual aids meeting. View and discussion of films. At 80 Portland Place, W.1. 6.15 p.m.
- Institute of Transport (York G. and S.). Paper by Mr. W. H. Vine, "Selling Transport." At Room 33, Railway H.Q. Offices, York. 7.15 p.m.
- Institution of Locomotive Engineers. Paper by Mr. K. P. Brockway, "Aluminium Technology and Railway Rolling Stock." At Institution of Mechanical Engineers, 1 Birdcage Walk, S.W.1. 8.30 p.m.
- Institute of Transport (Scottish). Paper by Mr. C. V. Hardie, "Materials Handling in Road Transport Operations." At Conference Room, 46 Bath Street, Glasgow. 6 p.m.
- Institute of Road Transport Engineers (North Eastern). Paper by Mr. J. L. Johnson, "Current Developments in Tyres and Steering Geometry." At the Three Tuns Hotel, Durham City. 7.30 p.m.
- Institution of Civil Engineers. Paper by Messrs. F. S. Snow and N. J. Payne, "The Development of Gatwick Airport." At Great George Street, S.W.1. 8.30 p.m.
- Industrial Transport Association. Paper by Mr. R. Hill, "Construction, Uses and Care of Tyres." At Royal Society of Arts, John Adam Street, W.C.2. 6.30 p.m.
- October 21.—Permanent Way Institution (London). Paper by D. O. C. Walker, "The Use of Track Tamperers." At 222 Marylebone Road, N.W.1. 6.30 p.m.
- Institution of Electrical Engineers (Supply). Chairman's address by Mr. J. R. Mortlock, "Where Next?" At Savoy Place, W.C.2. 8.30 p.m.
- British Institution of Radio Engineers (Medical Electronics). Paper by Mr. P. V. Byford, "Electronic Instrumentation for Aviation Medicine." At London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. 6.30 p.m.
- October 21-31.—International Motor Exhibition. At Earls Court.
- October 22.—Institute of Transport (Bournemouth-Poole). Paper by Mr. J. E. Cowdery, "To What Purpose?" At Town Hall, Bournemouth. 6 p.m.
- Institute of Transport (South Eastern). Paper by Mr. C. E. Whitworth, "Some Impacts of Air and Road Transport on Railway Economics and Practices." At Saracen's Head, Ashford. 7.15 p.m.
- Institute of Navigation. Annual general meeting and paper by Professor E. G. R. Taylor, "Mathematician and Navigator in the Thirteenth Century." At Royal Geographical Society, 1 Kensington Gore, S.W.7. 4 p.m.
- B.R. (Western) London Lecture and Debating Society. Paper by Mr. C. W. Rodd, "Development of an Industry—the Story of T. Wall and Sons, Limited." At H.Q. Staff Dining Club, 14 Bishops Bridge Road, W.2. 5.45 p.m.
- October 23.—Institute of Transport (Leeds G. and S.). Annual dinner. At Griffin Hotel, Boar Lane, Leeds. 7.15 p.m.
- Railway Correspondence and Travel Society (London). Paper by Mr. J. Fore, "Some Footplate Reminiscences." At Railway Clearing House, 163 Eversholt Street, N.W.1. 7.15 p.m.
- October 24.—Institution of Railway Signal Engineers (Bristol). Visit to Severn Tunnel hump yard and the Sudbrook tunnel pumping station.

OFFICIAL NOTICE

UNITED WELSH SERVICES, LIMITED

GENERAL MANAGER

A GENERAL MANAGER will be required from January 1, 1960, by this Company which operates approximately 200 public service vehicles in South Wales from headquarters in Swansea. Applicants should have had extensive experience in passenger road transport operations.

The salary will depend upon the present position, qualifications and experience of the successful applicant.

There is a contributory Pension Scheme. Applications setting out full particulars of age, present position and experience to be submitted not later than Saturday, October 31, 1959, marked "Private and Confidential" and addressed to the Chairman, Tilling Group Management Board, 10 Fleet Street, London, E.C.4.

[Another Official Notice appears on page 11]

NEW TURBINE TANKER

Launch of "Brandon Priory"

CHRISTENED by Mrs. Cyril W. Warwick, the single-screw turbine tanker *Brandon Priory* was launched by Hawthorn Leslie (Shipbuilders), Limited, from its Hebburn yard on October 5. The vessel is being built to the order of Warwick Tanker Co., Limited, a new company formed jointly by Houlder Brothers and Co., Limited, and the British Petroleum Co., Limited.

Length overall of the tanker is about 683 ft. and the breadth moulded 86 ft., while depth moulded to upper deck is 49 ft. 3 in. and the deadweight tonnage about 35,300. She is of the single-deck type with poop, bridge house amidships and forecastle, with raked plate stem and cruiser stern. The cargo space is divided into 10 main oil tanks subdivided by two longitudinal bulkheads, making 30 separate cargo tanks. The tanks in which ballast will most often be carried are fitted with cathodic protection provided by Metal and Pipe Line Endurance, Limited.

Between the cargo tanks and the engine space are arranged a cofferdam, oil fuel bunkers, settling tanks and main pump room. A deep tank for the carriage of oil fuel is arranged forward below a hold space, and the double bottom in way of the engine room is divided and arranged for oil fuel, feed water and lubricating oil drain tanks.

Pump Room

The main pump room has three Drysdale cargo oil pumps installed, each driven by a steam turbine fitted in the main engine room. These pumps are connected to 15-in. diameter main lines with 10-in. diameter branches and 12-in. diameter discharge pipes on deck. A clean ballast pump of similar type and make is also fitted in the pump room and connected to a 10-in. diameter clean ballast line serving Nos. 4 and 5 wing tanks.

Two steam-driven horizontal duplex stripping pumps by J. P. Hall and Sons, Limited, are also fitted in the pump room and connected to 6-in. diameter stripping lines. The John Hastie steering gear is of the electric hydraulic four-ram type. The steam windlass and poop capstans are by Emerson Walker, Limited, and the steam winches by John Lynn and Co., Limited.

Fire Precautions

Provision is made for high pressure, hot or cold water tank cleaning, and steam smothering fire extinguishing arrangements to all cargo tanks. CO₂ total flooding fire extinguishing equipment is provided for the protection of the boiler room and main pump room. Portable CO₂ fire extinguishers are also fitted in these spaces and in the engine room and galley. A normal outfit of portable fire extinguishers to comply with Ministry of Transport requirements is supplied for the accommodation spaces.

Provision rooms and cold chambers are arranged in the poop space and stewards' and general ship's stores in the bridge space amidships. The accommodation throughout is of a high standard with veneered plywood panelling in all officers' and engineers' cabins and public rooms, the lavatories and toilets being panelled with Marinite faced with Formica, the alleyways except on upper deck aft are lined with Formica-faced plywood or Marinite.

Bridge Accommodation

On the navigating bridge, in addition to radio office, chartroom and wheelhouse, cabins are provided for the accommodation of owners' representatives and pilots. The captain's accommodation consisting of dayroom, bedroom and bathroom is arranged on the upper bridge deck together with cabins for officers, radio officer, chief steward and navigating apprentices. The chief engineer's suite is arranged on the bridge deck with cabins for engineer officers, electrician, engineer apprentices, an officers' smokeroom and the hospital.

Accommodation for petty officers with a separate smokeroom is arranged on the boat deck aft. The crew's recreation room and a hobby workshop are also arranged on this deck. At the forward end of the poop deck deckhouse cabins are arranged for the catering staff. An engineer's dressing-room, duty mess and chief engineer's office are arranged on the starboard side forward of the dining saloon and pantry. The crew's cafeteria messroom and petty officers' mess are on the port side adjacent to the galley and servery. Seamen and firemen are berthed in single cabins in the poop space with a laundryman, laundry and drying-room.

Ventilation

A system of air conditioning, mechanical ventilation and heating supplied by Thermotank, Limited, is fitted throughout the accommodation spaces including bathrooms, washplaces and toilets. In addition, mechanical exhaust ventilation is arranged from the galley, pantries and refrigerating machinery space, and mechanical supply ventilation with air to atmospheric temperature to the stores

spaces amidships. Mechanical supply and exhaust ventilation is provided for the main pump room. Four Viking Marine glass fibre lifeboats are fitted, one of them equipped with an air-cooled diesel engine. The radio equipment and direction finder will be supplied by Marconi International Marine Communication Co., Limited, the radar equipment by British Thomson-Houston Co., Limited, and the echo sounding equipment by Submarine Signals Company.

Engines

The propelling machinery, which has been made by Hawthorn Leslie (Engineers), Limited, at its St. Peter's Works, consists of a single-screw geared turbine installation developing a maximum power of 15,500 s.h.p. and a continuous service power of 14,000 s.h.p. Steam is supplied by two water tube boilers at a pressure of 600 lb. per sq. in. and a temperature of 850 deg. F.

The power unit consists of one high-pressure turbine of the impulse type and one low-pressure turbine of the double-flow reaction type. The gearing is of the double-reduction articulated type, the drive from the turbines being transmitted to the primary gears through flexible couplings, and the drive from the primary gear wheels transmitted in turn to the secondary pinions through quill shafts and flexible couplings. For astern working, one high-pressure astern turbine of the impulse type is arranged at the forward end of the high-pressure ahead turbine and one low-pressure astern impulse turbine incorporated in the low-pressure ahead turbine casing. When operating astern, the unit develops 60 per cent of the service ahead power with normal steam conditions. The two boilers of the Foster Wheeler E.S.D. type, oil-fired and operating under forced draught conditions with steam air heaters are jointly capable of evaporating 165,000 lb. of steam per hour. Automatic combustion control is provided.

Generators

The electric generating plant comprises two turboalternators, one working and one standby, each 600 kW, 440 volts, three-phase, 60 cycles. In addition there is also a 150-kW diesel engine-driven emergency alternator. All the main auxiliaries, excluding the main feed pumps which are turbo driven, are electrically driven. The main regenerative condenser maintains a vacuum of 28 in. with sea water at 75 deg. F. The condensate from the main condenser is returned to the boilers through a closed feed system which also embodies an independent deaerator for use under harbour and manoeuvring conditions of operation.

Two high-efficiency self-contained distilling plants are fitted, each capable of producing 50 tons of fresh water per day and in addition, there is also an evaporator to produce 75 tons of fresh water per day. An auxiliary condenser takes the exhaust from the cargo pump turbines, and coil drains from the salt and fresh water evaporators.

HIGH-TEMPERATURE EQUIPMENT

Demonstrations in North-West

MODERN heat treatments demanding higher temperatures and close control and growing insistence on clean air and improved working conditions lend topicality to demonstrations being staged in Liverpool and Manchester by the Morgan Crucible Co., Limited, in co-operation with the Merseyside and North Wales Electricity Board and the North Western Electricity Board. The demonstration in Liverpool, at the Industrial Development Centre, Paradise Street, will be open until October 20 and that in Manchester, at the main Electricity Board showroom, Town Hall Extension, from October 26 to 30 inclusive.

A number of high-temperature furnaces, illustrating the versatility of Morgan Crucible furnace-heating elements, will be operating at temperature throughout the exhibitions and the complete range of elements now available, associated refractory materials and experimental furnaces will also be displayed.

Motors S.A., Apartado 4352, Estafeta Justo Arosemena, Panama, has been appointed sole agent for Leyland and Albion vehicles and diesel engines in the Panama Canal Zone, as well as for the Scammell Scarab mechanical horse in this area and in the Republic of Panama. The agent appointed in Honduras for Leyland and Albion products is Maquinaria y Accesorios S.A., Apartado 333, Tegucigalpa, D.C. Honduras.

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Reliable Trunk Services to all Ports

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BIRMINGHAM
323 High St., West Bromwich,
Staffs.
WEST BROMWICH 2801

CARDIFF
10 Duffries Place
CARDIFF 21631

LIVERPOOL
11 Old Hall Street, Liverpool, 3
CENTRAL 6386

LLANELLY
Morfa Works, Llanelly
LLANELLY 4302

SWANSEA
Exchange Buildings
SWANSEA 541715

NOTTINGHAM
Pavilion Buildings, Pavilion Road
West Bridgford
NOTTINGHAM 83401

OFFICIAL NOTICE

CITY OF BELFAST

ADVERTISING RIGHTS ON PUBLIC TRANSPORT VEHICLES (FORM No. 1132)

TENDERS are invited for the exclusive right of advertising on Belfast Corporation Vehicles (trolleybuses and double- and single-deck omnibuses) for five-year period commencing November 1, 1960.

Form of Tender and conditions may be obtained at Transport Department, Utility Street, Belfast. Each Tender in sealed envelope marked "Tender for Advertising Rights on Public Transport Vehicles, Transport Committee" and endorsed with the name and address of the tenderer must reach the undersigned not later than 4 p.m. on Tuesday, October 27, 1959.

An official receipt must be obtained for each Tender delivered by hand. Tenders sent by post should be registered.

The highest or any Tender will not necessarily be accepted.

JOHN DUNLOP,
Town Clerk.

City Hall,
P.O. Box 234, Belfast.

[Another Official Notice appears on page 10]

CLASSIFIED ADVERTISEMENTS

SITUATION WANTED

DISTRIBUTION Manager, aged 34, seeks new position in transport. Wide experience warehousing and traffic movement by road, rail and water. Ten years with present company. Box No. 3821, MODERN TRANSPORT, 3-16 Woburn Place, London, W.C.1.

SITUATION VACANT

EXPERIENCED commercial vehicle salesman required by manufacturer. Replies must state clearly in first instance age, career to date and salary expected. Apply reference "SM" Dennis Bros., Limited, Guildford, Surrey.

REGULAR CARGO SERVICES

between
LONDON
and



HAMBURG, BREMEN, RHINE PORTS, HARLINGEN, AMSTERDAM, ROTTERDAM, ANTWERP, GHENT, TERNEUZEN, DUNKIRK, CALAIS, BOULOGNE, TREPOT, DIEPPE, HAVRE, CHARENTE, BORDEAUX.

Coastwise to HULL

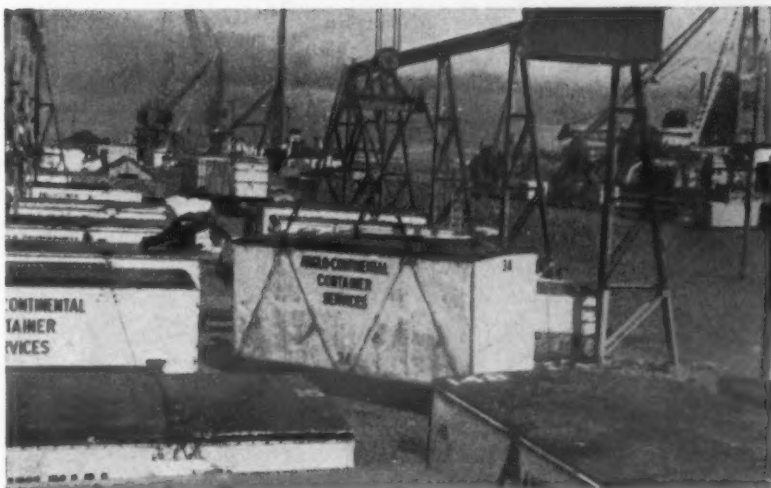
also between the following ports
LONDON, NEWCASTLE, MIDDLESBROUGH, and SOUTHAMPTON and OPORTO and WEST ITALIAN and SICILIAN PORTS.

BRISTOL CHANNEL PORTS (Bristol, Barry, Cardiff, Newport, Swansea) and HAMBURG, BREMEN.

SOUTHAMPTON and ANTWERP, ROTTERDAM, BREMEN, HAMBURG.

The GENERAL STEAM NAVIGATION CO. LTD.
15, Trinity Square, London, E.C.3
Phone: ROYal 3200

Daily door-to-door express container services in own ships to and from NORTHERN IRELAND



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The fitting of Genuine Girling Replacement Shoes ensures the braking qualities that you expect from a brand-new vehicle. Equally important—it brings assurance to the driver that no matter how heavy the load, his brakes won't let him down.

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955 H.P. Diesel-Electric Locomotive
(10 Ton Axle Load)

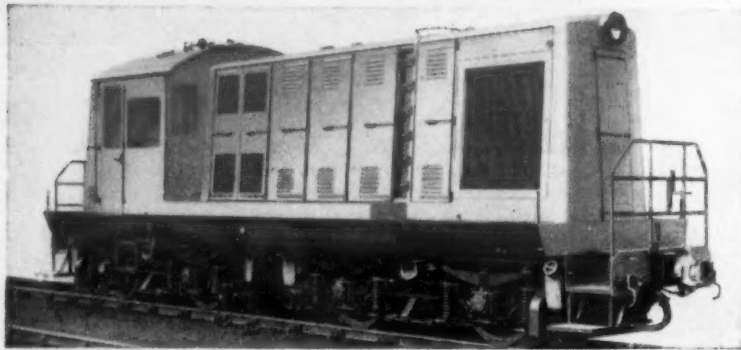
In collaboration with
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BRITISH RAILWAYS Three Unit Diesel Mechanical Railcars



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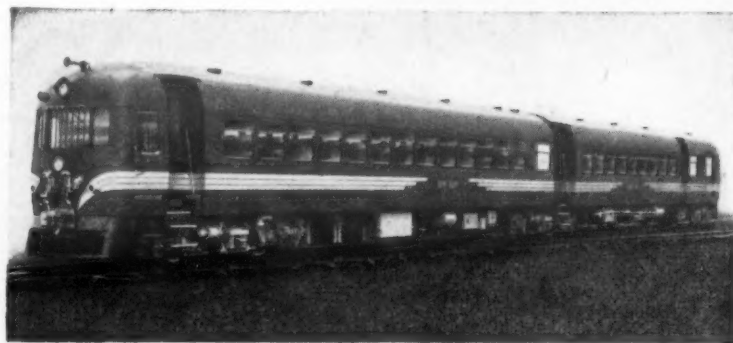
400 h.p. Diesel
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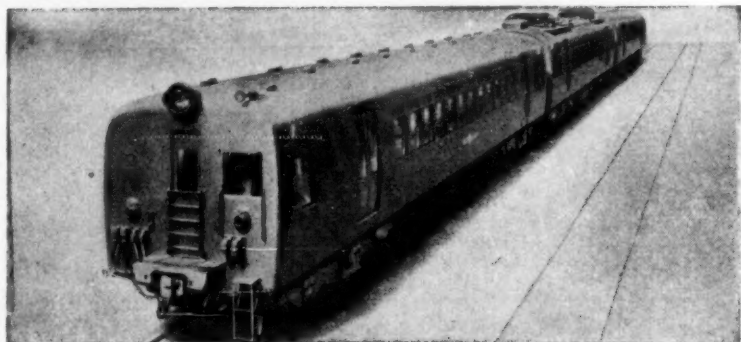
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Railcars

In collaboration with
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3,000 Volts, 800 H.P.
Three Car Train
In collaboration with
The English Electric
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BRITISH RAILWAYS

1,160 H.P. Diesel-Electric Locomotive

In collaboration with
Sulzer Bros. (London) Ltd
and
Crompton Parkinson Ltd



THE BIRMINGHAM

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TELEGRAMS
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MODERNISATION AT WORK

Varied Eastern Region Projects

MODERNISATION of British Railways involves many facets—new rolling stock and motive power and therefore new premises for service and maintenance; new freight handling equipment both in land goods stations and in the packet ports; new office accommodation to meet the needs of decentralised staffs. These notes embody descriptions of all three types of project on the Eastern Region.

Diesel Depot at Ipswich

The amount of diesel working which has been such a prominent feature of the Great Eastern

Selskab to Esbjerg are operated in conjunction with Eastern Region services and the companies concerned have been most anxious to co-operate in introducing improved methods. These conditions provided the opportunity to plan the throughout transit of all types of goods in the most efficient manner. Further, there are the train ferries from Harwich to Zeebrugge; through wagons permit daily carriage of merchandise right through to Continental destinations without intermediate handling.

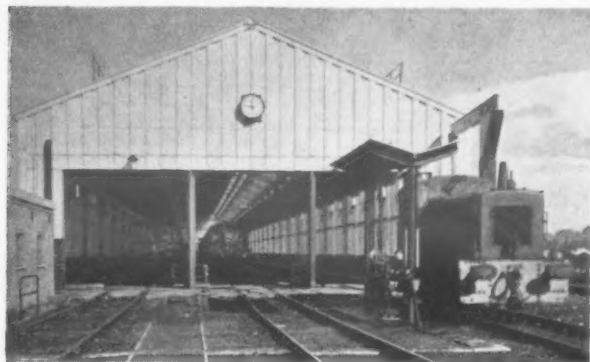
New vessels have recently been introduced on the cargo services from Harwich to Rotterdam and Antwerp. These vessels have very large McGregor-type hatches designed to permit the direct loading of containers throughout the holds. Up to 50 large B.R. containers may be carried and the floors of the holds are quite level to allow the free use of fork-lift trucks. Containers are available for a very large variety of traffics and provide through conveyance, without intermediate handling, from the trader's premises to Continental destinations.

Palletised Traffic

Although use of the train ferry and of containers is expanding, it was apparent that a substantial proportion of cargo, for one reason or another, would not be suitable for these methods of transport. It was, therefore,

decided that, so far as practicable, the remainder of the traffic would be palletised. One of the principal cargoes is perishable traffic such as tomatoes and lettuces from Holland. This cargo was previously handled at least six times after receipt from the Dutch exporter until delivery was effected in London. With the introduction of palletisation the handling of individual packages has been greatly reduced. The sorting and checking of cargo by individual marks and consignees which was previously a serious difficulty is now relatively simple. Damage no longer occurs from the repeated handling of the produce.

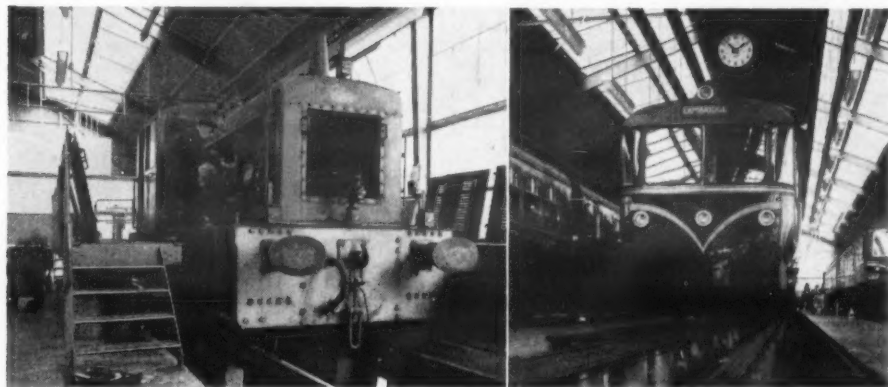
Loaded by the exporters on the quay at the Hook of Holland or Rotterdam or at the trader's premises, the pallets are then carried through as a unit load



Cambridge diesel maintenance depot

Line for some time and particularly in the last 12 months, could not be sustained without the provision of adequate maintenance and servicing arrangements. Main works facilities are in course of provision at Stratford and maintenance and servicing facilities for diesel multiple-unit trains are already in being at Stratford, Norwich and Cambridge. The last-mentioned is illustrated on this page. At Stratford there is also a depot for the maintenance and servicing of diesel locomotives and now a second one has been provided at Ipswich.

The major part of the then steam motive power depot at Ipswich was reconstructed in 1954; requirements of diesel traction were then in mind and so the conversion was greatly facilitated. On



Diesel shunter under inspection and railbus over pits at E.R. diesel depot, Cambridge

the civil engineering side, one of the most important tasks was the removal of the smoke chutes and flues and the general cleaning-up to remove the grime left by steam locomotives. Inspection pits were modified to suit the new requirements and flanked with high-level service platforms which in turn are connected with a bridgehead leading into the fitters' shop.

When Steam Working Ceases

Equipment of the maintenance depot includes a fuel oil storage and dispensing installation, with a tank capacity of 75,000 gallons, and similar equipment for lubricating oils. There is equipment for removal of sump oil from the locomotives and for mixing, storing, and dispensing chromate-treated cooling water. Workshop facilities include equipment for battery charging, injector testing, filter cleaning and degreasing of components, with cranes and a stillage truck to aid the handling of materials and components.

When steam working ceases, the redundant coaling plant, turntable and water columns will be removed. On part of their site a locomotive washing machine will be erected. Reinforced concrete work is being carried out by Kyle Stewart, Limited, Wembley. The lubricating oil installation will be provided by Wakefield-Dick Industrial Oils, Limited. With the exception of these, and of the locomotive washing machine, all the work involved will have been carried out by railway forces.

Diesel locomotive working based on the new Ipswich depot will cover passenger and freight train services between Yarmouth, Lowestoft, Ipswich and London and a number of cross-country services between Ipswich and Whittemoor. The equipment of some of the locomotives is referred to on page 5. The scheme will make a substantial contribution towards the complete elimination of steam traction throughout East Anglia.

Cargo Handling at Harwich

Special attention is being given by the Eastern Region to the mechanisation of cargo handling on its shipping services to the Continent. A survey of the traffics carried revealed that a substantial increase in productivity, together with an improved service, could be achieved by the introduction of mechanical handling. Through services are provided to all parts of the Continent. The shipping services from Harwich to the Hook of Holland, Rotterdam, Antwerp and Zeebrugge are B.R. owned. The parallel steamer service to the Hook of Holland owned by the Zeeland Steamship Company and that owned by Det Forenede Dampskibs-

to the importer's vehicle at Liverpool Street Station.

Det Forenede Dampskibs-Selskab, owners of the service from Harwich to Esbjerg, were pioneers in the development of mechanical handling in ships and the fish traffic and dairy produce from Esbjerg has been palletised for the past 10 years. A specially designed conveyor is also available for the discharge of boxes of fish from the 'tween deck through a side port, simultaneously with the discharge of the lower hold by crane, thus enabling the ship to be turned round in a reduced time.

Battery-electric fork-lift trucks have been provided at Parkeston Quay, the Hook of Holland and Liverpool Street. Worksaver power pallet trucks are used on the holds of the ships and hand pallet trucks are used for the shorter movements. Steel



Traffic manager's office at Gresley House, Doncaster

pallets 40 in. by 48 in. of the Markussen type have replaced the wooden pallets originally used.

Doncaster Traffic Manager's Office

When the Eastern Region of British Railways introduced its new traffic organisation in 1957, the Doncaster traffic area was formed as one of the four areas under the Great Northern line traffic manager, Mr. G. F. Fiennes. The staff of Mr. E. J. Stephens, traffic manager, Doncaster, was dispersed in a number of separate buildings. To realise the full benefits of the re-organisation it was necessary for the staff to be under one roof, and as no suitable existing accommodation was available, it was decided to erect a new block of offices.

Gresley House—named after the great chief mechanical engineer—contains 19,500 sq. ft. of office space. It was designed under the general direction of Mr. A. K. Terris, chief civil engineer, Eastern Region, by Mr. H. H. Powell, regional architect.

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BY COACH TO MOSCOW

(Continued from page 3)

The load comprised 17 people, including three drivers—one from Ford and two from Excelsior—and a steward from British European Airways. With these and their luggage, the additional fuel, equipment and spare parts, the running weight was little short of the designed gross weight of 8½ tons. A start was made from Victoria Coach Station at 8.47 p.m. on Friday, October 2, and Dover was reached at 10.57. Customs cleared quickly at Ostend, the journey was resumed at 5.06 a.m. B.S.T. and a non-stop run to the next frontier at Aachen, 153 miles, took 3 hr. 9 min. Frontier clearance here took 23 min. and was followed by a 220-mile leg at an average speed of 50 m.p.h. to Hanover, where there was a 20-min. stop to pick up fuel and food. A further stage to the East German frontier at Helmstedt on autobahn was covered comfortably at an average speed of over 60 m.p.h., as was also the 150-mile stage to the Polish frontier, which was reached at 6.07 p.m. on Saturday.

Frontier clearance took rather longer with easterly progression, taking approximately 1 hr. each at Helmstedt and Frankfurt-am-Oder and 2 hr. 10 min. at Brest Litovsk, though this last, which was reached at 4 a.m. on Sunday, was due to a misunderstanding on our part over the manning of the Polish frontier post. On the other hand, average speed increased as the journey progressed and road traffic became thinner. As an example, in the first 12 hr. of actual running, 500 miles was covered at an average speed of 47½ m.p.h.; this was increased to 49 m.p.h. by the time 24 hr. running was completed and again improved to an overall 51.16 m.p.h. when Moscow was reached at 5.44 p.m. European time (7.44 Russian time) on Sunday, October 4.

Vehicle Performance

As a measure of vehicle performance, the round trip was a resounding vindication of Ford Motor Company's confidence in its Thames chassis. Average speeds of around 50 m.p.h. in a coach of this type are perhaps easy enough to achieve over twin-track motorways, when baulking by slower traffic is at a minimum, but many hundreds of miles of this trip were over two-way roads, occasionally with indifferent surfaces and of only just comfortable width for two big vehicles. In general Polish and Russian main roads are well maintained, of tarmac or stone sets throughout the 1,000-mile route covered from the Polish western border to Moscow; they are signposted in accordance with internationally agreed standards and comprise mostly very long straight stretches with few gradients and easy bends.

On the two occasions when we took over the driving for short periods we found the vehicle easy to handle, with light, responsive and conveniently placed controls. The front-mounted 6D diesel engine provides a very lively performance at this weight and brings the road speed rapidly up to over 50 m.p.h. in low (6.25 to 1) axle ratio and to about 70 m.p.h. in high (4.5) ratio. Noise level was commendably low—a fabric cover was fitted over the engine cowling—and was a recommendation from the passengers' viewpoint of forward engine mounting, comparing favourably with underfloor mounting in lighter types of coach. The vehicle

(Continued at foot of next column)

VICKERS-BUILT SULZERS

(Continued from page 5)

Paris. The behaviour of the double-bank engine in the Roumanian State Railways twin-unit (still in service, as far as is known, 21 years later) has resulted in an order for further locomotives embodying the latest development of this engine design; the first of 16 units, set to 2,100 h.p. to suit local requirements, with the 114 tons all-up service weight carried on a Co-Co wheel arrangement, was delivered last month. In all, Sulzer Brothers have been concerned in nearly 100 locomotive designs operating in 25 countries.

In Britain

Manufacture of Sulzer diesel engines for traction in this country was started at the Armstrong-Whitworth Works at Scotswood-on-Tyne in 1931. Armstrong-Whitworth built various designs of locomotives including some for South America, besides the early shunting locomotives for the former L.M.S.R. mentioned previously. Railcars were also constructed for both home and overseas railways. Armstrong-Whitworth traction activity lasted until 1937.

After the war a manufacturing agreement was reached with Vickers-Armstrongs (Engineers), Limited, and the first order completed was 13 960-h.p. engines for the Coras Iompair Eireann. In 1955, orders were placed by British Railways on the London Sulzer company for 50 engines of 1,160 and 2,300 h.p. and subsequent orders placed in stages make a total on order for British Railways of 422 engines. These can be broken down into 198 six-cylinder, 77 eight-cylinder, and 147 double-bank 12-cylinder engines.

To meet the very large programme of engine building for British Railways locomotives, Vickers-Armstrongs has carried out considerable re-organisation of its shops to increase the rate of production. Of the total, 406 engines are being made by Vickers-Armstrongs.

(Continued from preceding column)

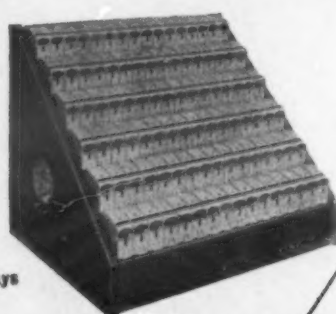
was remarkably stable, particularly considering its rather tail-heavy trim, and provided an exceptionally steady ride at all positions in the body of the coach.

Future Possibilities

Although the runs were safely accomplished, it is obvious that the high running speed achieved on the outward run was only possible through the most determined driving of a type that would not be tolerated by normal fare-paying passengers, even supposing that the vehicle would survive such treatment over an economic mileage. Good fortune was a factor in the achievement, for the weather, which at this season of the year could have been highly unfavourable, remained clear and dry virtually throughout. But the undertaking has proved the suitability of the inexpensive Thames chassis, which costs only £1,175 with diesel engine, for high-speed long-distance touring. Allied with the Dupre or other lightweight coachwork and luxury equipment, it forms a sturdy and businesslike diesel touring coach costing under £4,000. It opens up possibilities of extended Continental touring at substantially lower than current prices.

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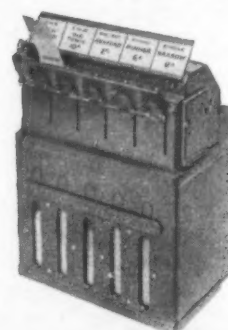
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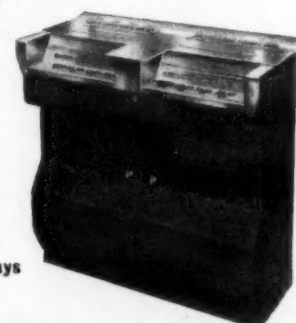
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SOCIAL AND PERSONAL

Tilling Group Appointment

THE British Transport Commission announces that Mr. T. W. H. Gailey, who, as already announced, has been appointed an executive director of the Tilling Group with effect from January 1, 1960, has also been appointed a director of the following Tilling group bus companies with effect from the same date: Hants and Dorset (chairman); Southern Vectis (chairman); Eastern National; Brighton, Hove and District; United Counties; Tilling Transport; and Thames Valley.

Mr. E. A. Smith has been appointed to the board of Acheson Colloids, Limited.

Mr. Robert N. Davies, works director at Cowley and chairman of the motor car body divisional board, has been appointed a local director of the Pressed Steel Co., Limited.

Mr. B. Griffiths, M.Inst.T., who is at present a director and general manager of United Welsh Services, Limited, has been appointed general manager of Crossville Motor Services, Limited, with effect from January 1, 1960. Mr. Griffiths has been general manager of United Welsh since 1946 and director of that company since nationalisation



Mr. B. Griffiths

in 1950. He started his career in passenger road transport in 1925 as accountant with Gower Vanguard Motors (1920), Limited, becoming secretary in 1931 and general manager in 1934. He became an area manager of United Welsh after it was formed to merge Gower Vanguard and other operators already in the Red and White group. He became accountant in 1941. He was chairman of the South Wales and Monmouthshire section of the Institute of Transport for the 1958-59 session.

Mr. J. Cooper (Leicester) has been elected chairman of the Association of Municipal Transport Managers in succession to Mr. A. F. Neal (Manchester). Mr. W. M. Hall (Liverpool) has been elected vice-chairman in succession to Mr. R. C. Moore (Sheffield). Mr. C. T. Humpidge (Bradford) was re-elected hon. treasurer.

Mr. S. H. Skirrow has been appointed service manager of the Ford Motor Co., Limited, in succession to Mr. A. F. Harper, who becomes technical assistant to the general sales manager. Mr. E. P. Tench becomes fleet sales manager, succeeding Mr. F. T. Phipps, who is retiring but who remains in an advisory capacity.

Mr. P. F. Shute, B.Sc. (Eng.), recently appointed divisional signal engineer, Manchester, London Midland Region, B.R., was educated at the City of London Freeman's School and City and Guilds College, London, and joined the signal and telegraph engineer's department of the L.M.S.R. in 1936 as a graduate apprentice. He became technical assistant in 1940 and was engaged on colour-light and power signalling schemes at Crewe, Wigan, Euston to Wembley, and Liverpool Lime Street. In 1946 Mr. Shute was appointed assistant (new works) at Euston, being responsible for the design of the station power signalling scheme. He was promoted assistant divisional signal engineer, Crewe, in 1953, indoor assistant (modernisation), Euston, in January, 1956, deputy assistant signal engineer (modernisation), Euston, in June, 1956. He holds the diploma of the Imperial College of Science and Technology. In his new post he will be responsible for the completion of the installation of colour-light signalling in the electrification scheme between Manchester and Crewe.

Mr. P. F. Shute

Mr. N. B. Spencer, M.Inst.T., chairman of the newly-formed New Zealand division of the Institute of Transport, has been visiting the United Kingdom and was present at the last meeting of the council of the Institute. Mr. Spencer is chairman of the Auckland Transport Board.

Particulars of the 1960 series of drawing and handicraft competitions arranged by the Institute of British Carriage and Automobile Manufacturers in conjunction with the Society of Motor Manufacturers and Traders, the Worshipful Company of Coach Makers and Coach Harness Makers of London, and the National Federation of Vehicle Trades have been announced. In all, prizes to the value of £900 are available, including free visits to a Continental motor show. There is a competition for a general arrangement drawing of a single-deck or double-deck bus or single-deck coach according to choice, but in any event on a rear-engined chassis. Another calls for a drawing of an all-steel fully-tropicalised and air-conditioned three-man driver's cab on a tractor chassis, including full-length transverse sleeper berth, the vehicle being intended for transcontinental operation. A third competition is for a four-door station-wagon type saloon.

Mr. C. C. Harrison has been made assistant sales manager of Henley's Tyre and Rubber Co., Limited.

Mr. P. B. Browne, M.P., who won the seat at Torrington for the Conservatives from the Liberals, has road haulage as well as farming interests.

We record with regret the death of Mr. C. U. Patel, accountant in charge of the establishment section of East African Railways and Harbours. He was the first Asian employee to attain senior officer rank and was 60.

Mr. R. F. Bennett, at present general manager and engineer, Great Yarmouth Corporation Transport Department, has been appointed general manager at Bolton to succeed Mr. A. A. Jackson upon his retirement.

Mr. H. R. J. De Keyser, southern manager of Blue Peter Retreads, Limited, has been appointed general sales manager for the U.K. Mr. J. A. B. Lloyd-Phillips has been appointed south western sales manager and Mr. W. Marriott south eastern sales manager.

As already recorded in MODERN TRANSPORT, Mr. E. B. Stead, M.I.Mech.E., formerly technical manager, has been appointed chief engineer of Albion Motors, Limited, following the retirement of Mr. J. A. Kemp. Mr. Stead joined the Albion company in 1936, having served with Ricardo and Co. (1927), Limited, as an assistant engineer, after completing his training there. Starting at Albion in the technical department, he became experimental engineer, and in 1949 technical manager, which post he has held until now. He has served as chairman of the Scottish centre of the automobile division of the Institution of Mechanical Engineers and was also on the original proving ground committee of M.I.R.A. He brings to his new position, which is also new to Albion, a background of essential practical experience in test and development, combined with an intimate knowledge of operators' requirements.



Mr. E. B. Stead

Mr. R. Morton Mitchell, chief executive officer of the Road Haulage Association, underwent an operation in Brompton Hospital last Friday.

The Minister of Transport has appointed Mr. T. S. Roberts, a nominee of the British Transport Commission, to be a member of the Transport Users' Consultative Committee for the Yorkshire area in place of Mr. H. L. Hopkins, who has retired from the service of the Commission. Mr. Roberts is chief docks manager, Hull.

Mr. Harold Wilmot, C.B.E., vice-president of the British Institute of Management and chairman and managing director of Beyer, Peacock and Co., Limited, will speak on 'The Management Burden' when he gives the fifth Elbourne memorial lecture at 8 p.m. on October 30 at the Royal Commonwealth Society. The Elbourne lecture was inaugurated in 1955 to perpetuate the memory of Edward T. Elbourne, founder of the Institute of Industrial Administration.

Mr. R. Roscoe, A.M.I.C.E., who has been appointed district engineer, Crewe, London Midland Region, B.R., was educated at Crewe County Grammar School and joined the L.M.S.R. in 1929 as a draughtsman in the same office of which he is now the chief. In 1950 he was made assistant to the district engineer, Bristol, and in 1954 became assistant district engineer, Oswestry. Two years later he went to Shrewsbury in a similar capacity and was transferred to the chief civil engineer's office at Paddington in 1957 as assistant (organisation and methods).



Mr. R. Roscoe

Mr. L. J. W. Bailey has succeeded Mr. E. F. Hingeley as general manager of Dunlop (Germany). Mr. Bailey was previously general manager of the India Tyre and Rubber Co., Limited.

A visual aids meeting of the Institute of Transport will take place on October 20 at 80 Portland Place, W.1, when three films, *Under the River*, *Journey from the East* and *Port of London* will be viewed and discussed.

International Aeradio, Limited, announces a reorganisation of its management structure upon the retirement of the operations manager, Wing Commander R. C. Lawes, O.B.E., on December 31 next. Mr. L. M. Layzell joins the management as technical manager, Mr. E. E. Warburg as commercial manager and Mr. J. P. Utterson as personnel manager.

The Eire Minister for Transport and Power, Mr. Erskine Childers, T.D., recently visited the C.I.E. railway works at Inchicore. His party was greeted by Dr. C. S. Andrews, chairman of C.I.E., and was accompanied on the tour of the works by members of the board and Mr. D. Herlihy, chief engineer. The Inchicore railway workshops, which were established in 1846, constitute the largest heavy engineering industry in the country. There are over 1,200 employees embracing in all 64 different grades and including a wide range of crafts. The work is primarily for the manufacture and upkeep of railway rolling stock and permanent way, but special work, which cannot be done elsewhere in the country, is undertaken occasionally for the Electricity Supply Board, Bord na Mona, St. Patrick's Copper Mines and other large industrial undertakings.

NOW IN SERVICE AT NEWCASTLE



On April 12th British Railways (North Eastern Region) brought into service their latest modern

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O.C.S. ROUTE RELAY SIGNALLING INSTALLATION

Housed in a new air conditioned signal box, this installation takes over the work previously done by four signal boxes employing a total of 538 levers and 34 switches. The panel incorporates 641 route switches, controls 10 miles of track, and has provision for possible future extension.

There are 94 colour light signals, 61 route indicators, 131 sets of electro-pneumatically operated points, 200 track circuits and 2,850 relays of various types.

The signal equipment was supplied by, and the internal work—wiring, erecting relay racks, etc.—was carried out by

Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

Saxby & Farmer (India) Private Ltd., Calcutta
Agents:—Bellamy & Lambie, Johannesburg

McKensie & Holland (Australia) Pty., Ltd., Melbourne
Westinghouse Brake & Signal Co. S.A. (Pty.) Ltd., Johannesburg.

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IMPORTANT CONTRACTS

Tug-Tender for Red Funnel Fleet

ON October 1, in the Woolston Shipyard of John I Thornycroft and Co., Limited, the keel was laid of a new vessel for the Southampton, Isle of Wight and South of England Royal Mail Steam Packet Co., Limited. This new addition to the Red Funnel fleet is a twin-screw tug and tender, having an overall length of 136 ft. and beam of 32 ft. Although designed primarily for towing, this powerful vessel with a bollard pull of approximately 20 tons, will also provide accommodation for passengers when used as a tender. Like the recent vessels built at Woolston for this company, the vessel will be modern in appearance, having a streamlined superstructure and funnel. When operating as a tender she will be capable of carrying six large cars and 250 passengers at a speed of 12½ knots. Alternatively, 400 passengers can be carried if there are no cars aboard. The main propelling machinery will comprise two Crossley Brothers marine diesel engines each developing 900 h.p. at 450 r.p.m. driving through a Modern Wheel Drive oil-operated reverse-reduction gear.

Repeat Order for Vickers Vigor Tractors
Vickers-Armstrongs (Tractors), Limited, announces that the Ministry of Supply has placed a further order for 49 Vickers Vigor tractors and matched equipment for use by the Royal Engineers. With 60 ordered in February, which have already been delivered to the Army, this new order brings the value of Vigor tractors ordered by the M.O.S. to about £1½ million.

North Eastern Region Contracts
Recent contracts placed by the North Eastern Region of British Railways include:

Wingrove and Rogers, Limited, Liverpool, for a fork-lift truck at Frisinghall.
Dow-Mac Products, Limited, Eaglescliffe, for prestressed concrete beams for bridge on the main line at Moorhouse (Covton), south of Darlington.
Wellerman Bros., Limited, Sheffield, for steel sheet piling for bridge at Aulsebrook on the main line north of York.
Compactors Engineering, Limited, Enfield, for a Vibrosol compactor for the chief civil engineer's department, York.
Dunlop and Ranken, Limited, Leeds, for steel framework, sheeting, glazing and builders' work at Leeds Wellington Street goods depot.
Cowans, Sheldon and Co., Limited, Carlisle, for capstans at Hall English Street goods depot.
Wm. Wadsworth and Sons, Limited, Bolton, for a replacement goods lift at Mytholmroyd Passenger Station.
Holm Press Piles, Limited, Hull, for piling work on bridge at Aulsebrook on the main line north of York.

New M. and D. Garage at Tonbridge
A contract is about to be signed between Maidstone and District Motor Services, Limited, and R. Corben and Sons, Limited, Maidstone, for the construction of the new Tonbridge bus garage. The garage will house 36 vehicles and entrance will be from both Quarry Hill and St. Mary's Road, with exit only from the St. Mary's Road end of the garage. The garage is to be in reinforced concrete comprising six barrel vaults with brick infilling between the supports and sliding folding doors to both entrances. A bus washing machine is to be installed. The building will take up only part of the site as a large portion of it is required for road widening and the remainder is to be left for future development. In the meantime, it will be grassed over and planted as necessary. At the rear of the building there will be an open space to take cycle

racks, with covered space for motor cycles. It is expected that work will start at an early date and will take approximately one year to complete.

New Eastern Region Contracts

The Eastern Region of British Railways announces the following contracts:

Wellerman Bros., Limited, Sheffield, 3, for reconstruction of portion of bridge over River Gipping between Bramford and Claydon.
Standard Telephones and Cables, Limited, London, E.16, for traffic control circuit transmission equipment in connection with the electrification of the London, Tilbury and Southend line.
Holm Press Piles, Limited, Hull, for concrete piles in existing platforms for new station buildings foundations at Barking.
R. G. Horton (Engineers), Limited, Brierley Hill, for reconstruction of portion of bridge over main lines at Renishaw Central Station.
Carter-Horsley (Engineers), Limited, Croydon, for repairs to bridge between Peakirk and St. James Deeping and to main girders and flooring of bridge between Whitby and Peterborough East.

Photographic Survey in Uganda

The Crown Agents for Overseas Governments and Administrations recently announced the award of a photographic contract to Fairey Air Surveys, Limited, for aerial photography of an area of 17,200 square miles in Eastern Uganda in the region of Lake Victoria on the Equator. It includes the foothills of Mount Elgon and the greater part of Lake Kyoga, which forms an important link in the Nile River system between Lake Victoria, the source of the White Nile, and Lake Albert. The contract will be supervised by the Directorate of Overseas Surveys. The photographs will be used for the preparation of maps required for general development in the territory.

TENDERS INVITED

THE following items are extracted from the Board of Trade Special Register Service of Information. Inquiries should be addressed, quoting reference number where given, to the Export Services Branch, Board of Trade, Lacon House, Theobalds Road, London, W.C.1.

October 26—Pakistan.—Department of Supply and Development for two diesel-engined TIFTERS, one petrol-engined LAND-ROVER, one petrol-engined PICK-UP TRUCK, and unspecified number of 8-ton capacity off-road six-by-four diesel-engined LOGGING LORRIES. Photocopies of tender documents from Export Services Branch, B.O.T., price 14s. (ESB/23136-23137/59.)

October 28—India.—Ministry of Railways for 150,000 tons of rails and 5,300 tons of fishplates. Tender documents and specifications, price Rs.15 (or equivalent), from the Director-General, India Store Department, Government Building, Bromyard Avenue, Acton, London, W.3. (ESB/22161/59.)

October 28—Egypt.—Purchases and Stores Department for 10,000 met. tons FLAT-BOTTOM RAILS, 52 Kg./M. Tenders to the Purchases and Stores Department, Railway Building, Fifth Floor, over Shoubra Subway, Shoubra, Cairo. (ESB/23483/59.)

October 30—Vietnam.—International Co-operation Administration for two left-hand-drive petrol-engined six-wheeled LORRIES, 135 h.p., 154-in. wheelbase. Tenders to Central Purchasing Authority, P.O. Box H5, Saigon. (ESB/23167/59/ICA.)

October 30—Vietnam.—International Co-operation Administration for nine four-by-four UTILITY VEHICLES and 12 4-ton four-by-four UTILITY VEHICLES (all petrol or diesel). Tenders to Central Purchasing Authority, P.O. Box H5, Saigon. (ESB/23169/59/ICA.)

November 1—Sudan.—International Co-operation Administration for 160 COMMERCIAL VEHICLES of various specialist types. Photocopies of tender documents from Export Services Branch, B.O.T., price 38s. (ESB/21980/59/ICA.)

November 4—Vietnam.—International Co-operation Administration for eight diesel-engined 15-cwt. LORRIES and 31 petrol-engined four-wheel-drive UTILITY VEHICLES. Tenders to the Central Purchasing Authority, P.O. Box H5, Saigon. (ESB/23796/59/ICA.)

SHIPPING AND SHIPBUILDING

Belship Loads A.E.I. Transformers

FROM Liverpool Associated Electrical Industries Limited, recently dispatched, in fulfilment of a single order, a 500-ton shipment of transformer equipment emanating from its Wythenshawe works, Manchester. The equipment consisted mainly of three 67,000-kVA transformers, four 8,000-kVA shunt reactors and a number of high voltage current transformers. A specially chartered Belship vessel is transporting the equipment to Port Augusta, South Australia, for the Port Augusta Power Station of the Electricity Trust of South Australia. A fourth transformer has been ordered for delivery in 1962. The motorship *Belkarin*, owned by Belships Co., Limited, of Oslo, was launched in 1952. She is of special construction, with the engines located aft, and with extra large hatches to deal with abnormal loads. She has a deadweight of 7,000 tons and a speed of 13 knots. The largest derrick available on the *Belkarin* has a capacity of 140 tons; no heavy lifting facilities are available at Port Augusta.

Dutch Order Revised

THE Ezzo Tankers, Incorporated, and Ezzo Nederland, N.V., have instructed the Verolme Dock and Shipbuilding Company of Rotterdam to alter an order for three tankers of 73,000 tons deadweight each into an order for three tankers of 77,000 tons deadweight each. The enlargement is made for economic reasons, it is stated. One of the three tankers is destined for the Ezzo Tankvaart Maatschappij N.V. (Ezzo Tankshipping Company), the other two tankers for one of the daughter companies of the Standard Oil of New Jersey. The construction of the first tanker will start shortly. The ships will not be able to pass through the Suez Canal when fully loaded. They have to sail under ballast through the Suez Canal and have to return via the Cape of Good Hope.

I.C.H.C.A. Administration

EXPANSION of the International Cargo Handling Co-ordination Association, which now numbers 747 members in 67 countries, with 11 national committees, has called for an overhaul of the original constitution and internal organisation. For the past nine months an international committee has been examining the position in great detail. The general assembly of the Association in Rotterdam on October 2 approved unanimously the modifications proposed by this committee. Its main aims were:

1. To assure the international character of the standing directorate of the Association.
2. To affirm beyond dispute that the Association is non-profit-making and is not financially interested in any commercial undertaking, either as a body or through the individual members of the staff.
3. Finally, and of great importance to the future, to reinforce the technical and administrative means needed by the Association in order to be able to deal with development, despite the diversity and growing complexity of the problems put to it.

The strength and composition of the council have been altered, while maintaining the wide and diversified representation both of the national com-

mittees and of isolated members, the aim of these modifications being to facilitate and intensify the work of the council. A small international executive committee has also been appointed to carry out the policies of the council and, especially, to be responsible for the proper functioning of the central office. The general assembly elected Vice-Admiral McIntock, president of the American national committee, senior vice-president and it conferred the title of president d'honneur on Admiral A. L. P. Mark-Wardlaw, who after eight years of intense work devoted to I.C.H.C.A., has recently resigned his active part in the Association.

Clyde Trust Deficit

THE Clyde Navigation Trust, whose revenue is down because of the shipping recession, while interest charges on loans are at a peak figure of £611,000, has just failed to balance its budget. Accounts for the year ended June 30 show a deficit of £1,453. It is the first loss since 1947, and only the fifth in 100 years. The volume of shipping entering and leaving the port during the year dropped by 387,140 tons to 15,155,074 tons, and is down by 3.2 per cent compared with 1939. The cargoes imported and exported amounted to 6,381,568 tons, a decrease of 825,729 tons and 3.1 per cent lower than 1939. Imports of grain and flower were 178,000 tons higher at 404,000 tons and phosphate rock imports jumped from 10,000 to 33,000 tons. Exports of iron and steel dropped by 103,000 tons, but outward shipments of scrap iron amounted to 62,000 tons.

FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations.

Charles Roberts

Group net profit of Charles Roberts and Co., Limited, for year ended March 31 was £252,553 (£152,759) after allowing for tax of £237,644 (£229,610), and depreciation of £67,684 (£35,597). Ordinary dividend 15 per cent (same).

C. C. Wakefield

The interim ordinary dividend of C. C. Wakefield and Co., Limited, for 1959 was 7½ per cent (same). The final payment last year was 15 per cent.

Atkinson Lorries (Holdings)

At the annual general meeting on October 6 Mr. B. F. Caunt, chairman of Atkinson Lorries (Holdings), Limited, said that after what may have appeared superficially to have been a less successful year than formerly, he could add that, although the immediately favourable effect of the removal of purchase tax was short-lived, subsequently the confidence created by the general industrial improvement and the hoped-for result of the election had stimulated the order book at home to such an extent that it was at the moment better than for some years past, although quite a percentage of the orders received, no doubt in common with the experience of competitors were only firm subject to the outcome of the election. It seemed ludicrous that the prosperity of any industry must depend on the vagaries of the political situation. At the moment the turnover was being maintained and might well be progressively increased for both home and overseas markets, probably limited temporarily, by the ability to maintain supplies of major units and, it seemed, maybe by over-enthusiastic competition.

NAAFI'S AUSTINS SERVE THE TROOPS
— wherever they are

FROM SNOW-BLEAK SALISBURY PLAIN to the steaming jungles of Malaya, Naafi serves the troops, supplying thousands upon thousands of Army, R.A.F. and R.N. units throughout the world.

To cope with a job this size their transport fleet is enormous in numbers and scope. In that fleet Austins, newcomers 4 years ago, now form a good part.

"Standardised on Austins"

Take mobile canteens. These vans are in use on every forces' station with outlying units. And not in this country alone, but in Cyprus, Singapore, Hong Kong, Malaya, Tripoli, the Maldives Islands. They face every kind of



Sea-stocking at Portsmouth. With a 6 a.m. start, driver Ray Davis gets round 26 ships by 10 o'clock stand-easy. His cargo—260 traysful of mixed pastries. His opinion of his Austin 5 ton diesel: "A really marvellous motor—beautiful performance. And very good for comfort—Naafi look after you there."

weather condition, cross ground you'd think twice about walking over.

Now listen to Mr. J. P. Macdonald, Controller of Transport. "For our Mobile canteens we have standardised on Austin 1 ton petrol-engined chassis. We have found Austins better suited to this work than any other vehicle. Even under the most arduous conditions they have proved more than equal to the job."

From warehouses and bakeries

Then take Austin 3 and 5 tonners. Log-books of those that work for Naafi's warehouses show long hours, long runs, weekly mileages of up to 1,500. Others work for bakeries—and it's always night work here, setting-off time anything from midnight to 5 a.m. with 100-mile-plus journeys ahead and 20-25 drops to make by army breaktime.

The world over

The world over Naafi's Austins are at work. In Malta 1 tonners deliver 9,000 loaves a day to British servicemen's families. In Aden and Singapore 15 cwt. Omnivans service Vendipac machines. And Naafi's first 5 tonner in Malaya is now operating—an Austin, built in Singapore.

Back now to Mr. Macdonald. "Austins measure up well and do a good hard job of work. After-sales service is good. Austins are getting an increasing stake in our home and overseas fleet."

Austin vehicles for the home fleet are supplied to Naafi by Maskells (Brixton) Ltd.

INVEST IN AN
AUSTIN
THE AUSTIN MOTOR COMPANY LIMITED
LONGBRIDGE • BIRMINGHAM



Naafi break on Salisbury Plain. Men of the Queen's Own Hussars take time off from tank training to warm up with a cuppa. The Austin 1 ton mobile canteen has had to cross rutted cart-tracks and rock-hard, snow-covered fields to reach the Centurions.

Night run from a bakery. Tray upon tray goes into the Austin 3 ton diesel before it starts on the Bovington-Blandford run, a round 178 miles. At Naafi's bakeries 36,000 pies and pastries are all in the week's work and you can see sausage rolls 48 feet long.